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# PROCEEDING OF INTERNATIONAL CONFERENCE

**on 19 & 20 November 2021**

**Theme- Geriatric Diseases-Care and Cure  
to Celebrate**



**jointly organized by**

**Gujarat Board of Ayurvedic &  
Unani System of Medicine &  
Parul University**

# JAITRA-2021

**Organized by : Department of PG & Phd Studies in Rasashastra &  
Bhaishajya Kalpana, Parul Institute of Ayurved, Parul University.**



**PROCEEDINGS  
OF INTERNATIONAL CONFERENCE  
THEME-GERIATRIC DISEASES-CARE  
AND CURE  
JAITRA-2021**



**Organized BY:**

**Department of PG & PhD Studies in Rasashastra  
& Bhaishajya Kalpana, Parul Institute of  
Ayurved, Parul University**



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### Message From President

Learning Ayurveda, a divine science of life, applying it to seekers of health and to serve human beings without any selfish motto transforms a human into a divine person. I am glad that Parul Institute of Ayurved is successfully transforming knowledge to aspirants that contribute for the up-gradation of the system of Ayurveda. On the eve of World Ayurveda Day and under the banner of Azadi Ka Mahotsav, Faculty of Ayurved, Parul University has well planned and organizing International Pre- Conference JAITRA-2021 is a great gesture. On this occasion, I would like to congratulate the Dean, Faculty of Ayurved, Staff and Postgraduate Scholars for their tremendous efforts to make this International Pre- Conference a grand success.

I wish for a greater success of International Pre-Conference JAITRA-2021

Dr Devanshu Patel  
President  
Parul University

### Message From Managing Trustee

I am pleased to know that the Faculty of Ayurved is organizing International Pre-Conference JAITRA-2021 on the occasion of World Ayurveda Day on 18<sup>th</sup> October 2021 and releasing Souvenir under the visionary leadership of Dr. Hemant D Toshikhan, Dean, and Faculty of Ayurveda. I believe this forum will prove beneficial to disseminate novel ideas and treatment strategies to the gathering. I take this opportunity to extend my warm greetings and felicitations to the organizer and JAITRA-2021 Team.

I wholeheartedly wish the Conference and Souvenir all success.

Dr Romal Patel  
Managing Trustee  
Parul University

## **MESSAGE FROM THE DESK OF DEAN, FACULTY OF AYURVEDA**

I am pleased to note that, the Department of Rasashastra and Bhaishajya Kalpana is organizing International Pre-Conference JAITRA-2021 on the occasion of World Ayurveda day and under the banner of Azadi Ka Mahotsav.

The proposed theme of the Conference, Geriatric Diseases-Care and Cure, explicitly needs such forums to effectively tackle the challenges of old age and to come up with eternally vibrant ideas and innovations. I am sure; the conference will abridge Proficient academicians, young researchers and postgraduate scholars for updating and exchanging the scientific information.

It is of no doubt that the proceedings of the International Pre-Conference JAITRA-2021 released may exist as a beneficial reference to all the participants

From the desk of Dean, Faculty of Ayurved, I extend my gratitude to the Organizing Secretary, Sub-Committees and all the Team Members of JAITRA-2021, who deserve remarkable appreciation for the dedicated, involved service to make this event a grand success.

I wish great success to this venture

JAITRA-2021

Dr. Hemant Toshikhanz  
Dean, Faculty of Ayurved  
JAITRA-2021

From the desk of organizing secretary  
EASY TO START HARD TO STOP IS KEY TO SUCCESS

It's my proud privilege to be as organizing secretary of International Pre-Conference JAITR-2021, Victory Over Old Age organized on the eve of World Ayurveda Day and under the banner of Azadi Ka Mahotsav. I extend a warm and cordial welcome to Eminent Speakers, Guests and all Participants.

Rasashastra is an indigenous and traditional heritage enriched with pharmaceutical principles and a treasure of diverse Herbo-Mineral formulations that are beneficial to combat ailments. Dohvada concept of Rasashastra has multidimensional approach towards treating Geriatric Diseases as a Rasayana and vyadhiharana Chikitsa. In pursuance of these points JAITRA-2021 is planned to reinforce these facts with suitable scientific validation.

Souvenir will be released to commemorate the event. It will include informative, educative articles with all abstracts of Paper presenters. The Souvenir undoubtedly makes path to learn knowledge about science of health with new dimensions.

I take this opportunity to express my sincere gratitude to Dean Faculty of Ayurveda, Resource Persons, Delegates, Team Members of JAITRA-2021 and all who have helped me in shouldering this responsibility.

By above and all is the blessings of Almighty Lord Dhantari made it possible to explicit my responsibility sincerely.

With Tender Regards

Dr Anitha.H  
Organizing Secretary  
JAITRA-2021

## **INTERNATIONAL PRE-CONFERENCE REPORT**

### **JAITRA 2021- VICTORY OVER OLD AGE**

**Dr.Anitha.H**

**Professor and HOD, DEPT of Rasashastra and BhaishajyaKalpana, Parul Institute of Ayurved, Parul University.**

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The department of Rasashastra and BhaishajyaKalpana, Parul Institute of Ayurved, Parul University, Vadodara in association with Indian Institute of Ayurveda and Rasashastra has organized JAITRA 2021- VICTORY OVER OLD AGE, an International Pre-Conference Webinar on “Geriatric Diseases-Care and Cure” on October 18<sup>th</sup>, 2021 on the occasion of World Ayurveda Day and under the banner of AzadiKaMahotsav. The conference has set with an objective of scientific approach towards different modes of Rasoushadhi Practises in Geriatric Diseases. The Conference was accomplished with the overwhelming response of more than 550 participants including Eminent Researchers, Academicians, Postgraduate and Ph.D. Scholars.

An Inaugural function of the conference was started with an invocation to Lord Dhanvantari followed by a Welcome speech by Dr.Hemant D.Toshikhane, Dean Faculty of Ayurveda, Parul University. The event was graced by pioneers in the field of Ayurveda, Dr.Srikant, Director General, CCRAS (I/C), Dr.B.B.Joshi, Professor and HOD, Ayurveda Mahavidyalaya, Hubballi, Dr PrashantJadar Dean, BMK Ayurveda Medical College, Belgaum, Dr R.S.Hiremath, Professor and HOD, Department of Rasashastra and Bhaishajya Kalpana, BMK, Ayurveda Medical College, Belgaum.

The highlight of the conference was an inspiring address by dignitary Dr.Srikant, Director General, CCRAS, wherein he stressed the need for a Collaborative, multidisciplinary approach in Research, Innovations and establishing Safety Profile and Clinical trials of Rasoushadhies. He assured support from CCRAS and extended the joining hands with us in Research studies to explore the grey area in Ayurveda and to update the facts and concepts.

The theme of the Conference, “Geriatric Diseases-Care and Cure” was presented by Dr.Anitha.H, Organizing Secretary, Jaitra- 2021, Professor and HOD Department of Rasashastra and BhaishajyaKalpana, Parul Institute of Ayurved, Parul University. She discussed ongoing research activities and innovations in the department of Rasashastra



and BhaishajyaKalpana, Parul Institute of Ayurved,

Dr.Abhay Kumar Mishra, professor, department of Rasashastra and Bhaishajya Kalpana, Parul Institute of Ayurved, Parul University has proposed the formal vote of thanks. He extended thanks to honorable Guests, eloquent Speakers, and panelists, participants and to all the team members of JAITRA 2021 who made an event successful.

The program was comprised of two plenary lecture sessions by invited Speakers followed by Oral Paper Presentations.

Dr.Gopikrishna.M, Chairman and Co-Founder, IIAR, Professor and HOD, Department of Rasashastra and BhaishajyaKalpana, SJG Ayurveda Medical College, Koppal, an articulate Orator delivered a talk on Rasoushadhies in Geriatric Practice. He presented an overview of the magnitude of the effect of Rasoushadhiesin diseases related to old age. The lecture focused on the clinical experiences of a speaker on different medicines such as Abhragarbhapottali, Yogas of Swarnamakshika, Swarna, kantalooha and Tamra in diverseGeriatric conditions. Speaker discussed the mode of administration of medicines and also highlighted the Rasayana effect of Rasoushadhies that help in the prevention and cure of Geriatric diseases.

The second scientific session was on Non-Drug TherapyIn Geriatric Diseases delivered by a renowned, legendary International speaker Dr.R.S.Sarashetty, Professor Emeritus, PFUR/RUDN, University,IOM, Moscow, Russia. He discussed on impact of AcharaRasayana in Geriatric Care and Cure. AcharaRasayana is an adravvyabhoota type of Rasayana in which no intervention with a Pharmaceutical agent is considered. Speaker focussed on all angles of health i.e. physical, mental, social and spiritual aspects of the Geriatric age group.He explained a methodology to rejuvenate tissues of the body, developing the psychological pace of human health. Effect of Music Therapy, Yoga is well highlighted with tips for graceful aging.

There were discussions on developing strategies for the dissemination of Ayurveda at the global level keeping in mind the education systems of different countries and the need for and current scenario of Ayurveda education abroad.

In the second half of the conference, four parallel sessions were held on oralPaper presentations by young researchers in Ayurveda. All the sessions were evaluatedon precise parameters by invited Scholarly Rasashastra academicians as Jury Members. Each session was judged by two panelists and 12 papers were selected for awarding the best paper presentation.

The conference has provided a platform for Eminent Researchers, Proficient Academicians, Ayurveda Practitioners, PG and Ph.D. Scholars to express their views on Geriatric care and Cure with relevance to Rasashastra. We are glad that the members who witnessed an event, felt a need for such a program in the continuum that can enhance the knowledge base of Ayurveda and Rasashastra in particular.

The organizer of JAITRA 2021 wishes to acknowledge eminent speakers, distinguished Guests, Dignitaries, Panellists, Subcommittees and all individuals who generously contributed to the success of the Conference.

I wholeheartedly thank Jaitra-2021 Team members Dr.Abhayakumar Mishra, Dr.Jayaprakash A N, Dr.Lekshmipriya S, Dr.Bankimchandra, and PG scholars for their unconditional tireless efforts which undoubtedly led this event grand success under the visionary leadership of Dr.Hemant D Toshikhane, Dean, Faculty of Ayurveda, Parul University.

# ROLE OF NUTRACEUTICALS IN GERIATRICS

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## **Abstract Background**

:

Geriatrics is a branch of medicine which deals with the healthcare of elderly people, aiming to promote health by preventing and treating diseases and disabilities in older adults. Among eight branches of Ayurveda, Jara Chikitsa is one and it resembles with geriatrics. Many Ayurveda treatises described sets of rejuvenative measures which are claimed to act as micronutrients offering a protection from external and internal stressors. This is being reintroduced as Nutraceuticals, term combining „Nutrition“ and „Pharmaceutical“. The purpose of both Rasayana and Nutraceuticals is same to achieve healthy life, prevention and treatment of disease. The concept of Rasayana has much relevance in the field of Nutraceuticals.

**Aim:** To find out the concept of Nutraceuticals and its relation to Geriatrics.

**Material and Methods:** Ayurvedic textual materials were referred mainly with available commentaries of Samhita, published books and internet sources.

**Results and Discussion:** The review revealed that the concept of a nutraceuticals in geriatrics was prevailing during Samhita period which aimed at the maintenance of healthy life. Ayurvedic principles of dietetics, Pharmaceutical preparation can correlate nutraceuticals in present scenario. Ayurveda prescribes specific diet patterns in healthy and diseased conditions known as Sada Pathya (ever been good for all) and Pathya (good for specific disease conditions). Most of the formulations in Pathya Kalpana have nutritional as well as therapeutic qualities. This highlights role of Kalpana (Formulation) as Nutraceuticals in Geriatric age group for preventive and curative heal

th.

**Keywords:** Ayurveda,JaraChikitsa,Kalpana, Nutraceuticals,Rasayana.



## INTRODUCTION

Human lifestyle drastically changing over last five decades due to urbanization, industrialization, hectic schedule and changing cultures. These factors have changed human habits and force them to fast eating, instant and tasty food, fast food, junk foods. These habits have directly affected our nutritional aspect of food and gradually decreased the quantity and quality of nutrients. Presently population is gradually suffering from many metabolic and degenerative diseases, which are primarily caused by nutritional deficiency. In recent years a pharmaceutical product “Neutraceuticals” has made a special attention among health professionals and people for their nutritional supplementation. The term Neutraceutical is a hybrid of nutrition a pharmaceutical and was coined in 1989 by Stephen DeFelice, founder and chairman of foundation for innovation in medicine.<sup>1</sup> Neutraceutical is defined as “any substance that may be considered a food or part of food and provides medical or health benefits, including the prevention and treatment of disease.”<sup>2</sup> A neutraceutical is demonstrated to have physiological benefits to provide protection against chronic disease. Foods and nutrients play a very important role in normal functioning of the body. They are helpful in maintaining the health of

individual and reducing the risk of a variety of diseases. Neutraceuticals are medicinal foods that play a role in maintaining wellbeing, enhancing health, modulating susceptibility and thereby preventing as well as treating exact diseases. The actual use of Neutraceuticals is to achieve desirable therapeutic outcomes with reduced side effects.<sup>3</sup>

Geriatrics or geriatric medicine is a specialty that focuses on healthcare on elderly people. It aims to promote health by preventing and treating diseases and disabilities in older people. Worldwide the elderly population is increasing and geriatrics is emerging as a challenging specialty. It is necessary to develop newer strategies for geriatric healthcare.<sup>4</sup> The most widespread conditions affecting older people are hypertension, congestive heart failure, dementia (Alzheimer’s disease), osteoporosis, breathing problems, diabetes, coronary heart disease, depression, incontinence, macular degeneration, frequent falls or bone fractures, Parkinson’s disease, cataract, cancer, glaucoma, impaired immunity etc.

<sup>5</sup> The conventional system of medicine focusing more in the area of management of disease of old age. Ayurveda has broad spectrum of preventive measures for combating the ageing process. Jara Chikitsa is one among the eight branches of Ashtanga Ayurveda and provides details about the various diseases and dietary supplements.

It deals with the diseases and conditions associated with old age. Ayurveda Geriatric procedures are aimed to cure the physical, emotional and behavioral disturbances with the help of well planned Ayurvedic Chikitsa procedures. In Ayurveda Geriatric healthcare

is termed as “Vridhopacharaneeyam”.<sup>6</sup> The physiological changes of ageing are elaborated in Ayurveda. According to Acharya Sushruta, old age is described as above 70 years. Acharya Charaka mentioned old age above 60 years. Vata

Dosha is predominant during old age and there is gradual decline of all Dhatu, Veerya, Indriya, Ojas, Bala and Utsaha along with loss of hair, wrinkling of skin, chronic and recurrent cough, shortness of breath, inability to perform routine activities etc. According to Acharya Sharangdhara, loss of different biological factors in different decades of life as function of ageing is mentioned.<sup>7</sup>

### **Aims and Objectives:**

The present study aims to validate the Nutraceutical aspects in geriatrics in Ayurveda. It explains the Ayurvedic perspective of Nutraceuticals in geriatrics.

In this study, references related to Nutraceuticals in authentic published classical texts to all available scientific publications were screened by its therapeutic as well as nutritional values in geriatric disorders according to their preventive and curative aspects and also web based information collected systematically. All data is compiled, analyzed and discussed through and in depth understanding about Nutraceuticals and Geriatrics from books and other authentic sources. Ayurvedic approach in Nutraceuticals in geriatrics have also been compiled in this review.

### **Concept of Nutraceuticals in Ayurveda**

Nutraceuticals possess demonstrable benefits in management of chronic diseases and so they go similar with Ayurvedic principles of Aahara Kalpana, which can be explained with an example of medicated food.

i.e. Moong-dal-rice (Khichdi) cooked by adding trikatu powder. It is mainly administered in fever as nutritional supplement and for increasing digestive fire in Agni Mandya condition. Ayurvedic concepts of Hita, Ahita, satmya, Asatmya,

Pathyapathya can be correlated to the concept of nutraceuticals.<sup>8</sup> According to Acharya Charaka,

“तच्च ननत्म्प्रमजीतस्वस्मन्मावततते।

another classification based on consistency of food products such as Ashita (Semisolid advised for aged people), Khadita (solid food, advised for young people with good digestion), Peeta (liquid in consistency),

अजातावकायाणाभल्लवकयंचमत.”

advisable for new borns, children and aka Samhita: Sutra Sthana: 5/31) a diet which besides providing the basic nutrition to the body, help to maintain the healthy state of the body and prevent the occurrence of the diseases should be consumed. According to Lolimbaja,

## “प्रेसनतगदाततस्मककभौष धननषेवण

### ।प्रेसनतगदाततस्मककभौषधननषेवण”(Vaidhya

Jeevana:1/10)if wholesome diet is given in a planned way, then there is no need to administer medicines and if wholesome diet is not being used then there is no need to give medicine as this is not going to cure disease in absence of wholesome diet. The science of food and nutrition in Ayurveda was much developed. Acharya Charaka has categorized all food items into 12 classes, Acharya Sushruta into 10 and 13 classes. There is diseased people) and Leeda (paste form can be licked, advisable for children and old people). The principle food articles described in Brihatrayi are Sagni Aahara Kalpana. This can be better applied in context of Samsarjana Krama, which helps to stimulate Agni nourish the body. Peya, Vilepi, Akrita yusha, Krita yusha, Akrita mamsarasa, Krita mamsa rasa are such techniques of food processing offers nutritional benefits. The metabolism of drug administered in body also depends on agni; therefore Ayurveda consider Agni as Prime factor for the absorption, assimilation and utilization of nutrients. Thus balanced diet along with proper functioning of Agni will help individual to acquire complete nutrition benefit of food stuffs.<sup>9</sup>

Table showing some examples of Nutraceuticals in Geriatrics in Ayurveda:

Sr.No.	Name of Ayurvedic formulation as Nutraceuticals	Indicated conditions in Geriatrics
1	Chyavanprasha	for general health and prevention of
2	Brahma Rasayana	For protection from mental stress.
3	Narasimha Rasayana	vigor and vitality
4	Brahmi Ghrita	For memory
5	Arjuna Ksheer paka	for cardioprotection
6	Rasona Ksheer paka	for cardioprotection
7	Shilajathu Rasayana	for diabetes mellitus
8	Agastya Rasayana	For asthma and bronchitis
9	Amalaki Rasayana	Immunomodulatory and anti-

## DISCUSSION



In Ayurveda the concept of Nutraceutical may not be compared as such with any of its basic concepts. But it has the concept of nutrition, dietary supplements, food regimen for patients and health combinations for pediatric to geriatric care in different context. While describing the treatments there are mentions of suitable medicated foods also. Acharya Charaka has mentioned Nitya Sevaniyadravya Shastik, Shali, Mudga, Saindhava, Amlaka, Yava, Antriksh Paya, Sarpi etc. which are considered as Shada Rasa Yukta Ahara (balanced diet).<sup>10</sup> Similar

references are available in seasonal regimens (Ritucharya). In traditional practice we can see its influence. As an example, Oushadha kanji in Kerala is a popular medicated food preparation in rainy season to prevent loss of appetite likely to happen then. Similarly, gruel preparations along with some ash or raw drugs, for specific diseased conditions are advised. Acharya Kasyapa, the author of Kasyapa Samhita has mentioned Ahara (food) as Maha-bheshaja in his text.<sup>11</sup> Pathya is a broad term consisting Pathya Ahara, Pathya Vihara (personal hygiene). Nutraceutical may come under the concept of

Pathya Ahara. The Pathya Kalpana (Ayurvedic dietetics) is mentioned for Healthy as well as diseased person. In Ayurveda, Bhaishajya Kalpana is a special branch deals with formulations of medicines. Basically two types of formulations i.e. Primary formulations like Swarasa (Expressed juice), Kalka (Paste), Kwatha (Decoction), Hima (Cold infusion), Phanta (Hot infusion) and secondary preparations like Avaleha (Medicated semisolid preparation), Asavarishta (fermentive preparation), Sneha (Medicated fatty preparation), Ksheerpaka (Medicated milk preparation). Today in market, there are many popular products sold in the name of Nutraceuticals. They contain vitamins, proteins, carbohydrates, minerals, as well as active principles that act in diseases e.g. Chyawanprasha Avaleha is a popular Avaleha, which has an annual market of 200 crore. It is used to treat diseases and also can be consumed by a healthy person to maintain health

12. As the increased Vata in old age leads to elevated catabolism, wear and tear leads to degenerative changes. All the Rasayana and Vajikarana formulations are advocated in young age, while Chyawanprash is Rasayana for old age as well. Along with Rasayana Ayurveda also explained about Ahara kalpana like Peya, Vilepi, Manda, Yavagu. Ayurveda prescribed 28 Aushadhsiddha Yavagu for different diseased condition. Ayurveda also prescribed various food based medicine like medicated milk, Ghrita, Khajuradi Tarpan, Kharjuradi Manth, Lajadi Tarpan, Aushadhsiddha Jal.<sup>13</sup>

## CONCLUSION

By above discussion it is proved that Nutraceuticals is a connecting link between two systems of medicine. The association of nutraceuticals with traditional medicine brings the long standing acceptance. Though Pathya Kalpanas cover all the nutritive values by providing all Shada Rasa Yukta Aahara which helps in maintaining the

Panchabhautika

nature of the body but still they can't always act as medicine in diseased conditions. So

Aahara Kalpana and Rasayana together act as Nutraceuticals. In old age, there are more degenerative phenomena in the body, Nutraceutical offers health benefits such as: improve physical and mental strength, help to combat nutritional deficiency, maintain circulatory process, maintain optimal health and also offer disease prevention.

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# **A Review on Nutraceuticals for Geriatric Care in Ayurveda**

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## **Abstract**

Geriatrics deals with the complex problems of old age. Jara chikitsa or Rasayana is the integral part of Ashtang Ayurveda. Aajastrik Rasayani.e. indulging in healthy diet and activities is mentioned in Classical texts. It becomes very difficult to meet the needs of body's nutrition as well as medicine in geriatric group. They suffer from Aruchi, Anannabhilasha, Shwasa, Kasa, Hridayvikruti, etc. Hence Nutraceuticals which have medicinal as well as nutritional value can be opted. Nutraceuticals provide palliative, curative and preventive care. They are palatable and safe. Traditionally different cooking techniques, use of specific utensils, and different drugs with medicinal properties i.e. Rasana, Ardrak, Maricha, etc. are used for enhancing nutritional value of food. Different Prakshepa Dravyas also add micronutrients to medicinal preparations. Different Aushadha kalpana like Avaleha, Ksheerpaka, Ghrita etc. and Pathya kalpana like peya, vilepi, yusha, mamsarasa etc. mentioned in Ayurveda are nutraceuticals. Formulations like Chyavanprashavaleha, Kushmandavaleha, Arjun Ksheerpaka, Rasana Ksheerpaka, Shatavari Ghrita, etc. are widely mentioned in granthas. Concept of Rasayana and Pathya is broader than Nutraceutical concept of modern science. Pharmaceutical companies are now days coming up with Nutraceuticals in granule, powder, capsule form or with added probiotics to the medicine. Present review study reveals traditional, classical and modern concept of Nutraceuticals.

**Keywords:-** Geriatrics, Jara, Rasayana, Pathya, Nutraceuticals, Micronutrients.

## **Introduction:-**

Geriatrics deals with complex problems of aging. Factors like aahar, vihar, manovastha, etc. contribute and accelerate aging process. Acharya Sharangdhar has mentioned order of degeneration of various aspects in each decade of life. Jara chikitsa is integral part of Ashtang Ayurveda which deals with the regeneration of dhatus and achieves palliative, preventive and curative aspects of treatment.

Hippocrates, a Greek Physician and Father of modern medicine, has rightly said,

“let food be thy medicine and medicine be thy food.”

Food, or part of a food, that provides medical or health benefits including the prevention and treatment of disease are called as Nutraceutical. Nutraceuticals will have medicinal as well as nutritional value.

Ayurveda has rich literature in Ahara and pathya pathyain Bhrihatrayi, Bhavprakashsamhita, Sharangdharsamhita, Kaidev nighantu, etc texts. Food ingredients like egg, milk products, fruit juices, animal products etc. are used in dietary preparations as well as for levigation during preparation of pharmaceuticals. Concept of Nutraceuticals in Ayurveda is broader than the modern concept of Nutraceuticals. Various Rasayanas in avaleha form, Ksheer pakakalpana, ghrita preparation, etc. Probiotics are now days added to the pharmaceutical preparations to enhance the drug activity.

The definition of Nutraceuticals is, "A Foodstuff (as a fortified food or dietary supplement) that provides health benefits"<sup>[1]</sup>

Nutraceuticals are bioactive and when used wisely can be a boon to geriatric group.

### **Aim and objective**

1. To explain importance of Nutraceuticals in Geriatrics.
2. To understand the traditional, classical, and modern concept of Nutraceuticals.
3. To explain role of Rasayana, Ksheer pakakalpana, Pathyakalpana, ghritakalpana and prashna dravya as Nutraceutical.

### **Materials and Methods: -**

Electronic search was done for data on nutraceuticals in various research articles.

### **Need of Nutraceuticals in Geriatric Group.**

Meeting medicinal as well as nutritional needs in Geriatric group is very challenging.

They suffer from agnimandya, aruchi, anannabhilasha, udarshool, atisar etc. annavahastrotas vikruti. Dantavikruti or lack of teeth will lead to difficulty in chewing in very old age group. Amount of food that is consumed by them is less. Also, use of pesticides and chemical fertilizers in agricultural practices, adulteration, preservatives, instant food, etc. has degraded the nutritional value of food.

Pollution, electromagnetic waves, etc. has accelerated the aging and degenerative changes.

Also, there

are disorders like shwas, kasa, hriday vikruti etc. in geriatric group. There is need of

nutritional supplement for speedy recovery after illness.

There are changes taking place at physiological, psychological, immunological as well as cosmetic level.

Kitchen remedies are easier, cheaper and local ingredients are easily available. Nutraceutical can meet the need of micronutrients and medicine.

Present study deals with the review of Nutraceuticals from Tradition, Ayurveda classics and modern trend.

### **Advantages of Nutraceuticals**

- Palatability
- More nutrition in lesser amount
- Safety
- effectiveness
- Targeted bioavailability

### **Traditional food as Nutraceutical**

Traditional food recipes designed by our wise ancestors are also nutraceuticals. Local fruits, vegetables, berries are part of our diet. Even flowers of Rose, Aragvadh, Bharangi etc. are used as vegetables or gulkand. There is wise use of condiments like Ela, Marich, Dhanyak, Haridra etc and haritvarga dravya like Rason, Ardrak etc. It adds micronutrients, enhances digestion of food and accelerates the absorption of nutrients. Specific methods of preparation, time required for cooking, use of medicated water, use of banana leaf, specific utensils etc also increase the nutritional quality of food.

### **Rasayana as Nutraceutical:-**

Rasayana is a very broad concept from Ayurveda. It is one of the integral parts of Ashtang Ayurveda. Rasayana bestows longevity, immunity, youthfulness, memory, complexion, good voice and strength. Rasayana has action on body, mind and sense organs. Intake of rasayan slows down the degenerative changes. Rasayana is classified into different types. One of which is Ajastrik rasayan.

„Ajastrik rasayana“ means indulging in healthy dietary habits like including milk and ghee in the diet daily. (Ksheerghritabhyas).

Name of the Rasayan	Foodingredient	Benefits
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1.Chyavanprash( Charak SamhitaChikitsa Sthan 1-1/62-74)	Amalaki, Draksha, Ela, Twak, Patra, Madhu, Taila, Ghrita	Amalaki is rich source of Vit.C, Immunomodulat ory, cytoprotective, hepa toprotective , hypolipemic activity, reduced postprandial g lycemia <sup>[2]</sup>
2.Brahma rasayan(Charak	Haridra, Ela, Taila, Sarpi, Madhu	Antioxidant <sup>[3]</sup>



Samhita Chikitsa Sthan 1- 1/41-57)		
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### **Ksheerpaka Kalpana as Neutraceutical:-**

Ksheerpaka kalpana is upakalpana of kwath kalpana. Milk is used as the medium of administration in this preparation. It is ajanma satmya to human beings. Milk brings down the ushnata and tikshnata of the drug. Digestion, absorption, and assimilation of the colloidal fat in the milk will be slower and hence the toxic effect of the tikshna dravyas will be minimized and medicinal effects will be enhanced. It will make the formulation palatable by masking the unpleasant taste. Bloating and constipation will be treated. Ksheerpaka kalpana are palatable, nutritive, rich in proteins, calcium and fats. Balance between medicinal and nutritional value is maintained in Ksheerpaka kalpana.

Name of Ksheerpaka	Foodingredient	Benefits
1. Rasonksheerpaka	Rason, milk	Acts as vatashamak, lowers lipid levels, retards atherosclerosis, antiarrhythmic effect, relaxant for aortic rings. <sup>[4]</sup>
2. Arjunksheerpaka	Milk	Cardioprotective (Chakradattahridrogachikitsa 31/9). antioxidant activity, reduces cholesterol levels. <sup>[4]</sup>

### **Ghrita Kalpana as Neutraceutical:-**

Ghee readily incorporates the properties of the other drugs when in contact with them without leaving its own natural properties. It is best among all sneha and other milk derivatives. Rich in fats, cardioprotective, good for skin, good for digestion and lowers lipid levels. It extracts lipid soluble active principle from the drug and enhances drug absorption. Ghee has therapeutic values. Ghrita preparations are more palatable, and pleasing with good odour.

Name of the Ghrita	Foodingredient	Benefits
1. Ashwagandha ghrita	Ghee, Ksheer	nourishes the body and

(Bhaishajya Ratnavalibalarogadhikar71/129)		improves strength
2.Changerighrita(Sharangdhar SamhitaMadhyamKhand 9/21-24)	Ghee, Shunthi,Dhanyak,Dadhi	Kapha vataroga,grahani, arsha,anaha,gudabhr amsha,mutrakrucchra
3.Draksha ghritha(BhaishajyaRatnavali Pandurogadhikara12/136)	Ghee,Draksha,	Draksha is calledPhalottama[5]i.e .bestamongallthe fruits. Beneficial inkamalaroga,gulma,panduroga, jwara,prameha,udar roga
5.Panchagavyaghritha(Bhaishajya RatnavaliApasmararogadhikar 25/32)	Ghee,Ksheer,Dadhi	contains milkand milkderivativeslikeghee andcurd. It is a source ofprobiotics. Psycologicaldisordersar emanaged.
6.Pippali ghritha (BhaishajyaRatnavaliRajayakshmadhikara14/212)	Ghee,Godugdha	Pleeha,yakrudroga, Agnimandya.
7. Shatavari ghritha(Bhaishajyartana valiAmlapittaroghadhi kara56/135-136)	Ghee,Godugdha	Vatajaroga,Shwas, Trishna, Raktapitta,Murccha
8.shunthighrita	Ghee,Shunthi	Shotha,Grahani,Pandu

### **Pathyakalpana asNeutraceutical:-**

ConceptofPathya–apathya,Satmya-asatmya,hitkara-ahitakaraharfromAyurvedaifappliedwisely,there willbebetter bodynourishmentandprevention ofdisease

<b>NameofthePathya Kalpana</b>	<b>Foodingredient</b>	<b>Benefits</b>
1. Peya(SushrutSutrasthana 46/344-345)	Rice	Carbohydrates

2.Vilepi(Sharangdar Samhita MadhyamKhanda2/ 166-167)	Rice	Carbohydrates
3.Yusha(Shrangdhar SamhitaMadhyam	Pulses,Shunthi	Proteinfromvegetable

Khanda2/154)		source
4. Mamasarasa(Charak Sutrasthan27/312)	Animalmeat	Protein from animalsource,fat
5. Anna(Sharangdhar Samhita MadhyamKhanda2/169-170)	Rice	Carbohydrate
6. Krushra/ Khiccha(Sushrut Sutrasthana46/ 345)	Rice,Pulses,	Carbohydrate,Protein

### **PrakshepdravyaasNeutraceuticals:-**

Prakshepdravyas

enhanceabsorptionofnutrients,addmicronutrientstoformulation,addtast

e.

Piperine,amajorbioactivecomponentofpepper,hasshowntoenhancethebioavailabilityofnutritionalandbotanicalcompounds<sup>[6]</sup>

eg. Twak,ela ,patra,nagkeshar,jatiphala,etc.

### **Modern trend of Neutraceuticals:-**

There is trend of health drinks and dietary supplements in society which is given mostly to pediatric and geriatric group. Ready to eat and health drinks formulae are preferred by people for health care of their family member, because of hectic life style. Protein supplements, vitamin supplements, calcium supplements are available in market. Many Ayurveda companies also have come up with neutraceuticals in granules, capsules and syrups.

Probiotics in the powder form are added to pharmaceutical preparations to enhance the absorption.

### **Result:-**

Present study compiles concept of Neutraceuticals in Ayurveda with reference to Rasayana, Pathya kalapana, Ksheerpaka, Ghrita Kalpana, Prakshepaka dravya. It gives review of need of Neutraceuticals in Geriatrics and mentions about which Neutraceuticals can be chosen depending upon their function.

### **Discussion:-**

Evidence based study of neutraceutical concept in ayurveda can bring revolution

in geriatric healthcare. There is scope for developing nutraceuticals with proper review of nutraceuticals in ayurveda.

Aging can not be avoided but the degenerative changes can be delayed. In this hectic lifestyle opting for bioactive nutraceuticals derived from staple food, local vegetables, fruits, flowers, milk derivatives etc along with other healthy lifestyle practices mentioned in Ayurveda will definitely lead to healthy Geriatric Group.

### **Conclusion:-**

Neutraceuticals are rich in medicinal as well as nutritional values as referred in many research articles.

Rasayana, Ksheerpaka kalpana, Pathya Kalpana, Ghrita kalpana and Prakshepa dravya are Neutraceuticals.

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# **THERELEVANCEOFNUTRACEUTICALSINGERIATRICH EALTHCARE**

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## **ABSTRACT**

India being a country where the elderly population constitutes 8.6% of the total population, geriatric health care is inevitable. Geriatrics is emerging as a major medical speciality in India and globally. Ayurveda already has a well developed speciality called Jarachikitsa, which is one among the Astangas of Ayurveda. It consists of vast explanations of various medical conditions during old age, preventive and curative aspects and formulations. Rasayana chikitsa stands as a perfect answer to various age related diseases and disorders. The concept of nutraceuticals is popular nowadays, but it has its roots in the scriptures of Ayurveda. Nutraceutical is defined as a “food or part of a food, that provide medical or health benefits, including the prevention and treatment of disease”. Ayurveda also emphasises on the importance of intake of nutritious food and nutritional supplements which helps in improving the strength of the body (Balya), improving the immunity (Vyadhikshamatva), preventing ageing and degenerative changes due to ageing (Rasayana) and improving the vitality and sexual vigour (Vajeeekarana).

The concept of nutraceuticals supports unique principle of “Swasthya Samrakshana”- prevention of diseases through maintaining health. Rasayana acts at the dhatu level like micronutrients which reflects its subcellular activity. It can be collectively compared with antioxidant, regenerative, immunomodulatory, and adaptogenic. In this paper, Definition, Synonyms, classification of nutraceuticals, significance of nutraceuticals in geriatric healthcare, examples of nutraceuticals and regulatory aspects of use of nutraceuticals in India will be discussed.

**Keywords: Nutraceuticals, Jarachikitsa, Rasayanachikitsa, Geriatric**

## **INTRODUCTION**

The term “nutraceutical” combines two words- “nutrient” (a nourishing food component) and “pharmaceutical” (a medical drug). The term “nutraceutical” was coined

in 1989 by Stephen De Felice, founder and chairman of the Foundation for Innovation in Medicine, an American organization which encourages medical health research located in Cranford, New Jersey. Nutraceutical is defined as a “food, or parts of a food, that provide medical or health benefits, including the prevention and treatment of disease”. Nutraceuticals contain compounds that are actually extracted from the whole foods. After extraction, they are concentrated and turned into pills or capsules, potions etc.

Synonyms of nutraceuticals are designer foods, functional foods, vita foods, pharmafoods, foodiceuticals, medifoods etc. It is legally defined as „Foods for specified health use“ (FOSHU)<sup>2</sup>. It includes isolated nutrients, herbal products, dietary supplements, genetically improved foods, “Bio” yoghurts, fortified breakfast cereals, vitamins, lipids, protein, mineral etc.

### DIFFERENCE BETWEEN NUTRACEUTICAL AND PHARMACEUTICAL

Nutraceutical focuses on prevention and wellness. It has less or no side effects. Nutraceuticals work on root cause and take longer time for recovery. Prescription is not needed for buying most nutraceutical.

Pharmaceutical focuses on illness and treatment. It provides instant relief but has few side effects. Pharmaceuticals are sold only on prescription except over the counter medicines.

### CLASSIFICATION OF NUTRACEUTICALS<sup>3</sup>

Nutraceuticals are broadly classified into dietary supplements, herbals and phytochemicals, nutrients etc in which Probiotics, Prebiotics, Antioxidants, Enzymes come under dietary supplements. Single herbal formulations, poly herbal formulations, botanical products etc. come under herbals and phytochemicals. Vitamins, minerals, amino acids, fatty acids etc. come under nutrients.

Based on food source, nutraceuticals are classified as plant derived, animal derived, mineral derived and microbial foods. Based on nutrient and non-nutrient components, it is classified as fibre, phenolic compounds, non-digestible oligosaccharides, phytosterols, glucosinolates, carotenoids, lycopene, organo sulphur compounds. Classification based on nutraceutical factors in specific foods

Nutraceutical substance/ family	Food with high content
Curcumin	Turmeric
Allyl sulphur compounds	Onion, garlic
Lycopene	Tomato
Lactobacilli, bifidobacteria	Yogurt and other dairy products

Classification based on mechanism of action with examples:

- Anti-cancerous properties - Turmeric



- Antioxidant property-Clove
- Anti-inflammatory property-Ginger
- Lipid lowering property-Garlic
- Osteogenic or bone protective property – Cissus quadrangularis/Asthisringala/Asthisamharaka
- Immunomodulatory-Tulsi

**Dietary supplement** is a product that contains dietary nutrients derived from food products.

They are intended to add further nutritional value to the diet. It is concentrated in liquid, capsule, pills and tablet form. It is mandatory that it should be labeled as a "dietary supplement" for customer to identify easily. E.g. Cod liver oil, Spirulina

**Nutrients**-Substances such as vitamins, minerals, amino acids, fatty acids and antioxidants are dietary ingredients.

- **Vitamins** play an important role in metabolism and enzyme systems. E.g. Thiamin, Riboflavin etc
- **Minerals** are important for immunity, reproduction and growth. E.g. Ca, Fe, Zn
- **Fatty acids** are responsible for healthy cell membranes, skin and hairs and proper functioning of nervous system, immune system and hormones. E.g. omega-3 fatty acids found in flax seed, canola etc
- **Antioxidants** prevent cellular damage and aging. E.g. Lycopene in tomato, Beta-carotene in carrots

**Herbals** - Nutraceuticals hold a great promise to improve health and prevent chronic diseases with the help of herbals. Some examples are flax seed oil and powder contains omega-3 fatty acid which is anti-inflammatory, analgesic, antipyretic, astringent and anti-arthritis, glucosamine from Ginseng etc

**Phytochemicals** are secondary metabolites which also act as nutraceuticals. These are non-nutritive plant chemicals that have either defensive or disease protective properties. Eg - carotenoids, coumarin, glucosinolates, flavonoids, isoflavonoids, limonoids,

lignans, polyphenols, phytosterols, anthocyanins, phytoestrogens, terpenoids etc. Sources are whole grains, beans, fruits, vegetables especially coloured ones.

**Probiotics** are live microbial feed supplement for improving its intestinal microbial balance. Probiotics are mainly used to treat lactose intolerance, acute diarrhea and antibiotic-associated gastrointestinal side effects. It helps in the production of the specific enzyme ( $\beta$ -galactosidase) that hydrolyzes the offending lactose into its component sugars. Eg. Lactobacillus bacteria and bifidobacteria are most important probiotic bacteria which are present in yogurt and other dairy products.

**Prebiotics** are nutraceuticals which promote the flourishing of probiotics. These

are dietary ingredients that affect the host by selectively altering the composition or

metabolism of gut flora. Its consumption generally promotes the lactobacillus and bacterial growth in the gut which helps in metabolism. Eg—Oligofructose, Inulin, Lactulose. Prebiotics are beneficial in improving lactose tolerance, dyslipidemia, relief from constipation and in certain tumors. Inulin is a prebiotic that has been widely used in processed foods. Some sources of prebiotics are asparagus, onion, garlic, banana, tomato, alliums, and beans.

**Nutraceutical** enzymes are an essential part of the body which is responsible for many biological functions. Enzyme supplements eliminate the symptoms of hypoglycemia, hyperglycemia, digestive problems, and obesity.

Based on the source, enzymes are classified as:

- ❖ Plant enzymes e.g. Hemicellulase & Pectinase
- ❖ Animal enzymes e.g. Trypsin, Chymotrypsin
- ❖ Microbial enzymes e.g. Invertase (yeast), Lactase

**Dietary Fibers** are edible plant material that is not hydrolyzed by enzymes of the digestive tract but digested by the microflora of the gut. Dietary fiber includes non-starch polysaccharides such as cellulose, hemicelluloses, gum and pectin, lignin and resistant dextrins. The soluble components of dietary fibers have bulking and viscosity-producing capabilities, which retard the gastric emptying of the stomach. This affects the rate of digestion and uptake of nutrients and feeling of satiety. It lowers the LDL and improves glucose tolerance. It reduces the risk of gastrointestinal diseases, hypertension, diabetes, heart disease, and colon cancer.

Dietary fibres are of two types

1. Water insoluble fibres
2. Water soluble fibres

Insoluble fibres absorb water into the gastrointestinal tract, increase the stool weight and promote regular elimination.

Soluble fibres regulate the blood sugar level and lower the serum cholesterol.

**Antioxidants** are substances that can prevent or slow down the damage to cells caused by free radicals. They are called "free radical scavengers". Free radicals are compounds that are linked to several illnesses like diabetes, heart disease, and cancer. Free radicals also help to fight infections. If they outnumber antioxidants, it leads to oxidative stress. So balance of these two is important. Antioxidant deficiency leads to diseases like cancer, rheumatoid arthritis, Alzheimer's disease, cardiovascular diseases etc. Excess intake of antioxidants also causes a phenomenon called "antioxidant paradox."

**Polyunsaturated fatty acids** are essential fatty acids that the body needs for brain function and cell growth. Our bodies do not make essential fatty acids. It is only

available through food. It includes essential fatty acids like omega-3 fatty acids and omega-6 fatty acids. Sources are Vegetable oil like soybean oil, sunflower oil etc, fatty fish like salmon, mackerel, herring, trout, nuts and seeds.

**Inorganic mineral supplements** are substances required by the body in small amounts for a variety of different functions like formation of bones and teeth and normal nerve function. They are essential constituents of body fluids, tissues and enzymes. People have different requirements of mineral, according to their age, sex, etc. Inorganic mineral supplements include Calcium, Magnesium, Manganese etc.

### **Regulatory aspects of nutraceuticals**

Regulatory authorities exist nationally and internationally which function to ensure safety of consumer's health, provide a uniform sale price and to ensure fair trade. International regulatory authorities are Food and Agriculture Organisation (FAO), Codex, World Health Organisation (WHO) and World Trade Organisation (WTO).

The primary set of rules for governing the human nutraceutical market is made by USA. They are:

- NLEA (Nutrition labelling and education act) 4 of 1990
- DSHEA (Dietary supplement and education act) 5 of 1994

Regulatory authority in India is Food safety standard authority of India (FSSAI) 6. It came into existence in 2008. Food safety commissioner is the implementing agency of each state.

### **Aims of FSSAI**

- Set rules for approval of nutraceutical products and dietary supplements manufactured and marketed in the country
- Legalise nutraceutical products
- Set standards for the food articles
- Regulate the manufacture and trade, storage and distribution

Food safety and standard regulations were notified in Gazette of India on 23rd December 2016 by FSSAI 6. These regulations do not allow the use of steroids, hormones and psychotropic ingredients in the food article. These regulations also make it mandatory to mention composition and contents of nutraceuticals in its label. Seven categories of foods which come under this regulation are:

1. Health supplements
2. Food for special dietary use
3. Food for special medical purpose
4. Food containing botanical and plants
5. Food containing probiotics

6. Food containing prebiotics
7. Novel drugs

### **"Rasayana"-The potential ayurvedic nutraceuticals for geriatric healthcare**

Rasayana chikitsa stands as a perfect answer to various age related diseases and disorders. It is not just a drug therapy, but is a specialized procedure practiced in the form of rejuvenative recipes, dietary regimen and special health-promoting conduct and behavior. It is a way to attaining longevity, memory, intelligence, youthfulness, complexion, voice, the optimum level of physical strength and sense organs. It acts at dhatu level like micronutrients, which reflects its sub-cellular activity. It can collectively be compared with antioxidant, regenerative, immunomodulatory, adaptogenic. It is classified as Kanya (Prana Kanya, Medha Kanya, Shree Kanya), Naimittika and Ajasrika.

### **DISCUSSION**

The concept of nutraceuticals supports unique principle of "Swasthya Samrakshana" - which is the prime motive of Geriatric health care. People started relying on the healing power of plant based products for many reasons- availability, affordability, safety or their belief in traditional cures. Ayurveda gives importance to the intake of nutritious food and nutrient supplements by elderly people which helps to improve the strength (Bala), immunity (Vyadikshamatva). Prevent ageing and degenerative changes due to ageing. The classical texts of Ayurveda contain references of application of various food products in various disease conditions. e. g. Use of butter milk in treatment of dysentery which is proved to be one of the best probiotic, Ginger in generalized edema which is a proved anti-inflammatory drug and so forth.

### **CONCLUSION**

Ayurveda contains a vast array of drugs and formulations for geriatric care like Chavanaprasha, Pippalirasayana etc. By focusing on developing these drugs and formulations and marketing them globally can help in growth of Ayurveda in the field of nutraceutical industry and serves in geriatric healthcare.

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# ROLE OF NUTRACEUTICALS IN GERIATRIC CARE WITH SPECIAL REFERENCE TO RASAYANA

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## **Abstract**

Ageing can be considered as “the sum total of all changes that occur in a living organism with the passage of time and lead to a decreasing ability to survive stress, functional impairment and death. With the rise in elderly population world over including India, it is the need of the hour to develop and adopt new policies for Geriatric healthcare. Rasayana is a unique therapeutic methodology that helps in delaying ageing and minimizes the intensity of problems occurring in this degenerative phase of life by restoring physiological processes that influence metabolic and immunological status. The concept of Rasayana has much relevance in the field of nutraceuticals. Concept of Rasayana is the most advanced form of preventive application specific to disease, age, climate etc which is similar to current use of nutraceuticals. Most of these herbs and formulations used as Rasayana are having proven antioxidant, anti-stress, immunomodulatory and adaptogenic activities and are included under the category of nutraceuticals

**Keywords:** Rasayana, nutraceuticals, geriatrics

## **Introduction**

Ageing can be considered as “the sum total of all changes that occur in a living organism with the passage of time and lead to a decreasing ability to survive stress, functional impairment and death”. Globally the number of people aged 65 or older is projected to grow from an estimated 524 million in 2010 to nearly 1.5 billion in 2050, with most of the increase in developing countries. The size of India’s elderly population aged 60 and above is expected to increase from 77 million in 2001 to 179 million in 2031 and further to 301 million in 2051. The proportion is likely to reach 12 percent in 2031 and 17 percent in 2051. According to the first Longitudinal Ageing Study in India (LASI) released by the Union Ministry of Family and Health Welfare on January 6, 2020, one in every three senior citizens in India suffer from some chronic disease, and around 23 percent of the elderly population have multi-morbidities. Health problems are supposed to be the major concern of a society as older people are more prone to suffer from ill health than younger age

groups. Significant causes of morbidity among the elderly are Degenerative arthritis, Osteoporosis, Alzheimer's disease, Depression, Parkinsonism, Hypertension, Diabetes Mellitus, Benign Prostate Hypertrophy, Cataract, Macular degeneration etc. and at the same time, they are vulnerable to infections involving respiratory (including TB), urinary and digestive tract. The potential economic and societal costs of noncommunicable diseases of this type rises sharply with age and have the ability to affect



economic growth. With the rise in elderly population world over including India, it is the need of the hour to develop and adopt new policies for Geriatric health care. Geriatric care has to address two-fold problems, firstly the basic anti-aging care to retard the rate of physiological ageing and secondly the medical management of diseases specifically occurring in old age. While the conventional medicine is apparently strong in terms of the second aspect, Ayurveda has the potential for disease prevention by health promotion and noncommunicable disease prevention. One of the branches of Ayurveda called Rasayana (rejuvenation) or Jarachikitsa promote healthy longevity. Jarachikitsa and Rasayana methodologically reduce geriatric degeneration. Rasayana is a unique therapeutic methodology that helps in delaying ageing and minimizes the intensity of problems occurring in this degenerative phase of life by restoring physiological processes that influence metabolic and immunological status. The concept of Rasayana has much relevance in the field of nutraceuticals. Concept of Rasayana is the most advanced form of preventive application specific to disease, age, climate etc which is similar to current use of nutraceuticals.

### **MATERIALS AND METHODS:**

Literary search of classical texts, database etc. related to the matter pertaining to nutraceuticals and Rasayana Chikitsa.

### **Nutraceuticals**

Nutraceuticals can be considered as a food or part of food that provides medical or health benefits including the prevention and treatment of a disease. It can be considered as any non-toxic food component that has scientifically proven health benefits, including disease treatment or prevention. The term “nutraceutical” is an umbrella term consisting of the two words “nutrient,” which is a nourishing food component, and “pharmaceutical,” which is a medical drug. The name was coined in 1989 by Stephen DeFelice, founder and chairman of the Foundation for Innovation in Medicine. Nutraceuticals include phytochemicals, dietary supplements, functional foods, medical foods and specific dietary patterns. Based on chemical constituents, they are categorized as polyphenols (flavonoids, anthocyanins, isoflavones, flavanones, coumarins, tannins, lignins), isoprenoid derivatives (saponins, carotenoids, terpenoids, tocotrienols, tocopherols, terpenes), carbohydrate derivatives (ascorbic acid, oligosaccharides, non-starch polysaccharides), fatty acid and structural lipids, amino acid derivatives, micronutrients (vitamins, minerals) and microbes (probiotics, prebiotics).

### **Types of nutraceuticals**

1. Nutraceuticals can be classified as

- a) Potential nutraceutical: One which promising approach towards particular health/medicinal benefits.

- b) Established nutraceuticals: A potential nutraceuticals become established nutraceutical only after there are sufficient clinical use to demonstrate benefits.

## 2. Nutraceuticals based on sources:

- a. plants: tomato, garlic, Momordica etc.
- b. animal: shark liver oil, cod liver oil etc.
- c. mineral: ca, mg, phosphorus etc.
- d. microorganism: Bifidobacterium, lactobacilli

## **Rasayana therapy**

Rasayana especially deals with the science of nutrition, geriatric care and rejuvenation. It stands as an answer to the problem of healthful longevity. It refers to a specialized regimen which includes rejuvenative remedies or drugs, dietetics, overall healthy life-style and positive psychosocial conduct. It influences the fundamental aspects of the body viz. dhatus, agni and srotas thereby enriches the nutritional value of the circulating plasma, improves the digestion, absorption and metabolism and enhances the micro-circulation and tissue perfusion. Ayurvedic texts describe a large number of rasayana drugs both herbs and minerals to be used singly or as compounds. Most of these herbs and formulations are having proven antioxidant, anti-stress, immunomodulatory and adaptogenic activities. Some Rasayana are also disease-specific as they induce specific immune and bio-strength to combat a particular disease. Such Rasayana are called Naimittika rasayana like Shilajatu for diabetes mellitus. Some Rasayana are also age-specific and can be prescribed for a particular age group. While another category of Rasayana called Ajasrika rasayana refers to continued consumption of nutritious diet such as milk, ghrita etc. in order to maintain optimum nutrition by way of direct nourishment.

## **Rasayana vis-à-vis nutraceuticals**

It is clear that Rasayana therapy of Ayurveda is having a multidimensional approach to provide physical, social and psychological support. It promotes preventive strategies for maintenance of good quality of life and at the same time addresses age-related morbidities. Analysing the drugs used in rasayana therapy, single herbs like Ashwagandha, Guduchi, Brahmi, Shatavari etc. are also considered as nutraceuticals

from a modern perspective. Even formulations like Chyavanaprasha, Brahmarasayana, various Ksheerapaka and Ghrita Kalpana can be included under the umbrella of nutraceuticals as they provide nutritional benefits as well as manage the disease conditions.

## **Role of Rasayanavis in nutraceuticals in geriatric care**

The age related disabilities can be delayed or treated with this therapy and thus can make elderly healthier and happier. As a result, rich, good and healthy tissues develop in the body and a person gets to be nutrient tonics, antioxidants, anti-stress, adaptogenic and immuno-modulators. The net effect of all these attributes is the anti-aging effect. Certain recent studies on popular rasayan remedies like Amalaki, Ashwagandha, Guduchi, Brahmi and Chyavanprash have shown evidence to suggest their efficacy as anti-aging remedies. During the process of ageing an individual goes on losing the age-related bio-qualities and if this loss is compensated by age specific rasayana in specific age group, the rate of ageing can be retarded to some extent and one can promote longevity.

**Table no.1 showing single drugs used in Ayurveda having Rasayana property**

<b>Drug name</b>	<b>Latin name</b>	<b>Dose</b>	<b>Action</b>
Haritaki	Terminalia chebula	Churna-3-6gm	Laxative, astringent, purgative, antibilious, anti-oxidant
Amalaki	Embilica officinalis	Swaras- 10-20ml Churna-3-6gm	Anti-inflammatory Anti-diabetic Anti-fungal Anti-viral Anti-bacterial
Guduchi	Tinospora cordifolia	Kwatha-50-100ml Churna- 3-6gm Satwa-1-2gm	Immunity booster, enhances memory, detoxification, anti-ageing properties, liver function booster, health rejuvenator
Ashwagandha	Withania somnifera	Churna-3-6gm Kshara-1-2gm	Reduce blood sugar level, anticancer properties, stress and anxiety control, anti-depression, anti-inflammatory, improve brain function and memory,

Vridhadaru	Argyreia speciosa	Churna-3-6gm	Anti-diabetic,anti-microbial,anti-oxidant, anti-inflammatory,contro lhypertension
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Nagabala	Grewia hirsuta	Kwatha-50- 100mlMula twak churna-3-6gm	Demulcent, anti- acidic, expectorant, Antipyr etic diureticAphrodisiac carminative cardiacproperties
Nagadamana	Sansevieria roxburghiana	Swarasa-10-20ml	Antiinflammatory
Shatavari	Asparagus racemosus	Churna-3-6gm	Antioxidant Anti inflammatoryImm unity boosterDiuretic Maintain bloodsugar Treatkidneystone Anti agingAntidepressi on
Punarnava	Boerhavia diffusa	Churna-3-6gm	Antispasmodic Antimicrobial Anti-inflammatory
Aparajita	Clitoria ternatea		Anti- inflammatoryImpr ove memoryDetoxifier Cure neurologicaldisor ders
Rasna	Pluchea lanceolata	Kwatha-50-100ml	Anti-inflammatory Analgesic
Jivanti	Leptadenia reticulata	Churna-3- 6gmKwatha-50- 100ml	Revitalizing Rejuvenating Lactogenicpr operties Anticancerproperty
Mandukaparni	Centella asiatica	Swarasa-10-20ml	Rejuvenator Antioxidant Antibacterial
Shalaparni	Desmodium gangeticum	Kwatha-50-100ml	Anthelmintic Anti- catarrhalCar minativeDiur eticExpectora nt Anti-diarrheal

**Tableno.2RasayanadrugshavingaffinitytowardsspecificDhatu**

Rasa	Draksha,Shatavari,Kharjura
Rakta	Amalaki,Bhringaraja,
Mamsa	Masha,Aswagandha,Bala,

Meda	Guggulu,Shilajit,Haritaki,Guduchi, Lashuna
Asthi	Vamshalochana
Majja	Vacha,Shankhapuspi
Shukra	Kapikachu,Vidarikanda,hatavari

## **SingleRasayanadrugs for some specific Disease conditionsinGeriatricpopulation**

### **1.Diseasesofeye:**

Jyotishmati(Celatruspauniculata),Triphala(Threemyrobalans),Shatavari (Asparagusracemosus),  
Yashtimadhu(Glycyrrhizaglabra),andAmalaki(Emblicaofficinalis)

### **2.DiseasesofHeart:**

Shaliparni(Desmodiumgangaticum), Arjuna (Terminalia arjuna),  
Guggulu(Commiphoramukul),  
Pushkarmula(Inularacemosa).

### **3.Skindiseases:**

Bhallataka(Semecarpusanacardium),Vidanga(Embeliaribes)and Bakuchi(Psoraliacoryfolia).

### **4. Rasayanafor overallHealth:**

Guduchi (Tinospora cordifolia), Amalaki (Emblicaofficinalis),Ashwagandha(Withania somnifera),Cow“smilkand  
Takra.

### **5. Asthma:**

Shirisha (Albezia lebbeck),  
Agastya(Sesbaniagrandiflora),Haridra(Curcuma longa),Haritaki(Termineliach  
ebula).

### **6.Arthritis:**

Rasona(Alliumsativum),Sallaki(Bosweliaserrata),Guggulu(Commiphoramukul),Ashwagandh  
a(Withaniasomnifera)andSunthi(Zinziberofficinale).

### **7.Neuropathies:**

Rasona (Allium sativum), Guggulu (Commiphora mukul), Bala (Sidacordofolia),Ashwagandha(Withaniasomnifera).

### **8. Diabetes:**

Amalaki (Emblica officinalis), Haridra (Curcuma longa),  
Tejpatra(Cinnamomumtamala),Methika(Trigonellafoenumgraecum).

## 9. Lipiddisorders:



Guggulu (Commiphora mukul), Haritaki(Terminilia chebula),Pushkaramoola(Inularacemosa), Vacha (Acoruscalamus).

#### 10. Hypertension:

Rasona (Allium sativum), Sarpagandha (Rauwolfia serpentina), Aswagandha(Withaniasomnifera),Jatamansi(Nardostachysjatamansi).

#### 11. BrainandMemoryDisorders:

Brahmi (Becopamonnierii),Mandookaparni (Centela asiatica),Jyotishmati(Celastruspauniculata),Kapikachhu(Mucunaprurietus),Tag ara (Valerianawallichii).

**Tableno.3Common Rasayanaformulations mentionedin Ayurveda**

Nameoftheformulation	Reference
Haritakirasayana	Ch.chikista1/1
Bhrahmarasayana	Ch.chikista1/1
Chyavanaprasha	Ch.chikista1/1
Agastyarasayana	Ch.chikista17
Narasimharasayana	sahasrayoga
Pippalivardhaman rasayana	Ch.chikista1/3
Brahmighritarasayana	Su.chikista27
Triphalarasayana	Ch.chikista1/3
Nagabalarasayana	Ch.chikista1/2
Tilarasayana	Astangahrudaya
Indroktarasayana	Ch.chikista1/4
Bhallatakarasayana	Ch.chikista1/2
Shatavarighrita	Bhaisajyaatnabali
Phalaghrita	Astangahrudayauttarasthan34

#### Dissscusion:

Geriatric health issuescanbemanagedbetter withnutraceuticals whichcanbecorrelated to Rasayana dravyas used in Ayurveda. Rasayana are primarily of promotivevalueandareessentiallymeanttorejuvenatethebodyandmindtoimpartlongevityaga instageingandimmunityagainst disease. Ayurveda has providedconsiderableemphasesonthepresentationofageingprocessandRasayanatherapy.

It provides an ample opportunity to improve the quality of life among the aged and people can remain healthy and independent well into old age and can continue to contribute to their communities and families by regular use of Rasayanadrugs.

### **Conclusion:**

- Ayurveda has provided considerable emphasis on the presentation of ageing process and Rasayanatherapy.
- Geriatric health issues can be managed better with Rasayanadrugs which can be correlated to nutraceuticals in many ways.

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## Nutraceuticals in Geriatrics

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### Abstract:

Geriatrics is a branch of medicine that addresses the complex needs of older patients and emphasizes maintaining functional independence even in the presence of chronic disease. Older adults are a heterogeneous population with diverse nutritional requirements. Geriatric medicines not only aim to promote health by preventing, treating diseases and disabilities in older adults but also to support the metabolism and repair capacity. Like functioning of every nutrition stage, such as ingestion, digestion, absorption,

transport, assimilation, and excretion, which is transformed with aging. Thus, development of effective dietary interventions for promoting healthy aging is an active but challenging area of research because aging is associated with an increased risk of chronic disease, disability, and death. The most widespread conditions affecting older people are diabetes, hypertension, congestive heart failure, arthritis, osteoporosis, breathing problems,

and cataract, to name a few. Decreased immunity is also partially responsible for the increased morbidity and mortality resulting from infections in the elderly. Nutritional status is one of the chief variables for infection since elderly people are at increased risk for micronutrient deficiencies due to a variety of factors including social, physical, economic, and emotional obstacles to eating. There is an urgent need to shift priorities to increase our attention on ways to prevent chronic illnesses associated with aging. Also individually, people must put increased efforts into establishing healthy lifestyle practices, like exercise and including consuming a more healthful diet. The present review thus focuses on the phytochemicals of nutraceutical importance for the geriatric population.

**Keywords:** Nutraceuticals, Geriatrics, Ayurveda Nutraceuticals.

### Introduction

Aging is a complex and inevitable biological process that is associated with

numerous debilitating health effects. Older adults are a heterogeneous population with diverse nutritional requirements. For the elderly group, the most important purpose of nutrition is

not only growth, but also to support the metabolism and repair capacity, thus delaying aging related problems. In aging the body begins to have difficulty absorbing and processing certain nutrients, which can be aggravated by the effects of certain medications. On the other hand, the rhythm of metabolism and appetite itself is reduced, so that food intake is usually lower, causing a lower intake of nutrients. It is evident that in both developing and developed countries of the world, nutrition-modifiable disease is potentially responsible for a substantial portion

of global deaths. Important areas of disease and disability in the aging populations like dyslipidemia and heart-related problems; hypertension and stroke; cancer; reduced mobility accompanied by excess body weight with an increased risk of developing type 2 diabetes; Alzheimer's

disease and other cognitive impairments including depression; physical deterioration of bones and joints associated with osteoporosis and arthritis; vision impairment problems including cataracts and macular degeneration and an increased risk of pulmonary problems and infectious diseases in which nutrition play an important role in prevention. The term nutraceutical is a hybrid of nutrition and pharmaceutical and was coined in 1989 by De Felice which laid the foundation for innovation in medicine. It was defined as any substance that may be considered a food or part of a food and provides medical or health benefits, including the prevention and treatment of disease. Such products may range from isolated nutrients, dietary supplements and diet to genetically modified foods, herbal products, and processed foods such as cereals, soups, and beverages. A nutraceutical is demonstrated to have a physiological benefit or provide protection against chronic disease. So as people grow older, they need fewer calories but more nutrients to maintain proper health. Therefore, Aging and Nutrition have a direct interrelationship with each other.

### **Nutraceuticals<sup>1</sup>**

The term nutraceutical encompasses a broad spectrum of commercially available products in which a part or a part of food (nutrient) is intended to provide medical or health benefits, including the prevention and treatment of disease (pharmaceutical). Nutraceuticals have no formal regulatory definition, but they can be broadly defined to include functional foods, dietary supplements, and medical foods. Like nutraceuticals, functional foods have no legal definition but are distinguished from other types of nutraceuticals because they are recognizable as conventional food products. Chemically, nutraceuticals may be classified as isoprenoid derivatives (terpenoids, carotenoids, saponins, tocotrienols, tocopherols, terpenes), phenolic compounds (coumarins, tannins, lignins, anthocyanins, isoflavones, flavanones, flavanoids), carbohydrate derivatives (ascorbic acid, oligosaccharides, nonstarch polysaccharides), fatty acid and structural lipids (n-3 polyunsaturated fatty acids, conjugated linoleic acid, monounsaturated fatty acids, sphingolipids, lecithins), amino acid derivatives (amino acids, allyl-S

compounds, capsaicinoids, isothiocyanates, indoles, folate, choline), microbes (probiotics, prebiotics),

and minerals (Ca, Zn, Cu, K, Se) 1. They play a crucial role in maintaining optimal immune response, such that deficient or excessive intakes can have negative impact on health.

## **Types of nutraceuticals<sup>2</sup>:**

### **1. Traditional Nutraceuticals:**

Simply natural, whole foods with new information about their potential health qualities. Ex: Lycopene in tomatoes, Omega-3 fatty acids in salmon, Saponins in soy.

### **2. Non-traditional nutraceuticals:**

Foods resulting from agricultural breeding or added nutrients and/or ingredients.

Phytochemicals of nutraceutical importance for geriatrics.

Phytochemical/nutraceutical	Target disease/condition
Calcium and vitamin D	Osteoporosis, cancer, diabetes
Antioxidants (vitamin E, vitamin C, polyphenols)	Cancer, heart disease, neurodegenerative disease
B vitamins (folate, vitamin B6, vitamin B12)	Heart disease, cognition
Omega-3 fatty acids (fish oil, DHA, EPA)	Inflammation, heart disease, stroke
Plant stanols/sterols	Elevated blood cholesterol, heart disease
Glucosamine, chondroitin, and collagen	Osteoarthritis
Lutein, zeaxanthin, and lycopene	Macular degeneration
EGCG	Cancer
Fiber (soluble and insoluble)	Diabetes, constipation
Prebiotics and probiotics	Diarrhea
Potassium	Hypertension
Whey protein	Sarcopenia
Zinc	Immunity, macular degeneration
Coenzyme Q10	Inflammation, endothelial dysfunction

### Examples of nutraceuticals<sup>3</sup>

Class/components	Sources	Potential benefits
Carotenoids Beta-carotene	Carrots, pumpkin, sweetpotato, spinach	Anti-oxidant
Lutein, Zeaxanthin	Spinach, corn, eggs, citrus fruits, carrots	Eye health
Lycopene	Tomato, watermelon, grapefruit	Prostate health
Carotenoids Beta-carotene	Carrots, pumpkin, sweetpotato, spinach	Anti-oxidant
Lutein, Zeaxanthin	Spinach, corn, eggs, citrus fruits, carrots	Eye health
Lycopene	Tomato, watermelon, grapefruit	Prostate health
Dietary fibre Insoluble fibre	Wheat bran, fruit skins	Digestive health, carcinogenic
Soluble fibre	Peas, beans, apples, citrus fruits	Carcinogenic
Fatty acids Monosaturated fatty acids	Olive oil	Reduces CHD
Polyunsaturated fatty acids	Walnut, flaxseeds	Heart and eye health
Flavonoids Anthocyanins	Berries, cherries and grapefruits	Brain health
Flavanols	Tea, cocoa, chocolate, apples, grapes	Heart health
Prebiotics	Whole grains, onions, garlic, honey, banana	Digestion and support of calcium absorption
Probiotics	Dairy products	Digestion health

### Nutraceuticals in Ayurveda<sup>4</sup>

#### Drug Substance of Plant Origin Used as Dhatu Poshana

- Aindri (Bacopa monnieri), Kapikacchu (Mucuna pruriens), Atirasa (Asparagus racemosus)



us), Payasya (*Holostemma marheedei*), Kshiravidari (*Ipomoea digitata*), Ashvagandha (*Withania somnifera*), Bala (*Sida cordifolia*), Atibala (*Abutilon indicum*), Amrita (*Tinospora cordifolia*), Abhaya (*Terminalia chebula*), Dhatri (*Emblica officinalis*), Jivanti (*Leptadenia reticulata*), Mandukaparni (*Centella asiatica*), Sthira (*Desmodium gangeticum*), Punarnava (*Boerhaavia diffusa*).

### **Drug Substances of Mineral Origin used as Dhatuposhana**

- Svarna (gold), Rajata (silver), Tamra (copper), Yashada (zinc), Vanga (tin), Loha (iron), Abhraka (mica). Mineral origin drugs are mostly used in the form of Bhasma. Before using them one must ensure that they are made in accordance with the classical methods for best efficacy, least adverse effect and of standard quality.

### **Drug Substances of Vegetable origin used as Dhatuposhana**

- Jivanti-shaka (leave of *Lepadenia reticulata*), Punarnava shaka (leave of *Boerhavia diffusa* and *Boerhaavia verticillata*), Shatavari ankura (young shoots *Asparagus racemosus*), Balapatra (leaves of *Sida cordifolia*) Sringataka fruit (endosperm of *Trapa bispinosa*), Varahikanda (bulb of *Dioscorea bulbifera*), Kharjura (fruit of *Phoenix dactylifera*), Akshota (endosperm of *Juglans regia*), Vatada (endosperm *Prunus amygdalus*), Mridvika (dried fruit *Vitis unifera*).

### **Drug Substances of Animal origin used as Dhatuposhana**

- Mamsa of Aja (goat), Aavika (lamb), Varaha (pig), Chataka (sparrow), Kukkuta (male chicken), Anda (egg), Matsya (fish).

### **Commonly used dietary supplements as Dhatuposhana are**

- Chyavanaprasha, Amritaprasha, Brahmarasayana, Aamalakavaleha, Bhallataka Kshir aetc.

### **Conclusion**

As people grow older, they need fewer calories but more nutrients to maintain proper health. People burn fewer calories during physical activity when they age, but even the most active aging body gradually loses muscle tissue, and less muscle translates to a lower calorie requirement. At the same time, however, their appetites decrease as previously noted, their need for several nutrients goes up or at least remains the same in order to enable the body to run at peak efficiency as the years pass. To fill these nutrient gaps nutraceuticals and supplements are used. Hence, a wide range of unresolved issues regarding the management of malnutrition in older persons need to be addressed. Altogether, high-quality research is urgently required to develop effective strategies for the prevention and treatment of malnutrition in the increasing number of old and very old patients at risk. The association of nutraceuticals with traditional medicine is bound to bring the long-lasting consumer acceptance when supported by current modern medical research.

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# IMPORTANCE OF NUTRACEUTICALS IN GERIATRICS

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## **ABSTRACT**

**Background:** - Aging is a universal, complex and unavoidable biological process which is associated with numerous health effects. Geriatrics is a speciality that focuses on healthcare of elderly people and aims to promote health by preventing and treating diseases

and disabilities in old age group. India being a country where the elderly population constitutes 8.6 % of the total population, geriatric healthcare is inevitable. There is need of good nutritional supplement for speedy recovery after illness.

**Aim:** - To explain importance of Nutraceuticals in Geriatrics.

**Material and Methods:** - Ayurvedic textual materials were referred mainly with available commentaries of Samhita. Research articles on Rasayana, Ksheerapaka, Ghrita, Pathyakalpana, Prakshepa dravya were referred.

**Results and Discussion:** - The current scenario reveals the vitality of nutraceuticals in geriatrics was prevailing during Samhita period which aimed at maintenance of healthy life. Ayurveda prescribes specific diet patterns in healthy and diseased conditions known as Sada Pathya (ever been good for all) and Pathya (good for specific diseased condition). Rasayana, Ksheerapaka, Pathyakalpana, Ghrita kalpana and Prakshepa dravya are Nutraceuticals. This paper focuses on to find out the concept of Kalpana (Formulation) as Nutraceuticals in Geriatric age group for preventive and curative health.

**KEYWORDS:-**

Nutraceutical, Geriatrics, Nutrients, Rasayana, Aging, Ayurvedic Nutraceutical.

Every individual in the world can experience aging. Aging has two main components, chronological aging and Physiological/Biological aging. Geriatrics is emerging as a major medical speciality in India and globally. WHO defines old age as  $\geq 60$  years (developing countries) or  $\geq 65$  years (developed countries).<sup>1</sup> In old age, the rhythm of metabolism and appetite itself is reduced, so that food intake is usually lower, causing a

lower intake of nutrients. Decreased immunity with aging and deficiency of micronutrients is responsible to get infectious agents. Lack of teeth will lead to difficulty in chewing in very old age, amount of food that is consumed by them is less. Also, the use of pesticides and chemical manures in cultivated practices, adulteration, preservatives, instant food has degraded the nutritional value of food. The physiological changes of ageing are elaborated in Ayurveda. According to Acharya Sushruta old age is described as above 70 years. Acharya Charaka mentioned old age as above 60 years. According to Acharya Sharangdhara, loss of different biological factors in different decades of life as a function of ageing is mentioned. There is a need of good nutritional supplements for speedy recovery. Nutraceutical is defined as “any substance that may be considered a food or part of food and provides medical or health benefits, including the prevention and treatment of disease”.<sup>2</sup>

Ayurveda has a well-developed speciality called Jarachikitsa, which is one among the Astangas of Ayurveda. It deals with the diseases and conditions associated with old age. In Ayurveda Geriatric health care is termed as “Vridhopacharaneeyam”.<sup>7</sup> Ayurveda has rich literature in Ahara and pathya pathyain Bhrihatrayi, Bhavprakash Samhita, Sharangdhar Samhita, Kaidev Nighantu, etc. texts. In Ayurveda, Bhaishajya Kalpana is a special branch that deals with formulation of medicines, in those secondary preparations like Avaleha, Asavaarista, Sneha, Ksheerpaka etc. not only used to treat the disease but also can be consumed by a healthy individual. Food ingredients like egg, milk products, fruit juices, animal products etc. are used in dietary preparations as well as for levigating during preparation of pharmaceuticals. Concept of Nutraceuticals in Ayurveda is broader than the modern concept of Nutraceuticals. Various Rasayanas in avaleha form, Ksheerpaka kalpana, ghrita preparation, etc. Probiotics are nowadays added to the pharmaceutical preparations to enhance the drug activity. The conventional system of medicine focusing more in the area of management of disease of old age. Ayurveda has a broad spectrum of preventive measures for combating the ageing process. Nutraceuticals are bioactive and when used wisely can be a boon to the geriatric group.

### **Aims and Objectives:**

1. To explain importance of Nutraceuticals in Geriatrics.
2. To validate the Nutraceutical aspects in geriatrics in Ayurveda.
3. To explain role of Rasayana, Ksheerpaka kalpana, Pathya kalpana, Ghrita kalpana and Prakshepa dravya as Nutraceutical.

A meta-analytical scientific review study is carried out on possible herbal formulations which may be considered as nutraceutical in geriatrics. Research articles on Rasayana, Ksheerpaka, ghrita, Pathya kalpana, Prakshepa dravya were referred. Review of literature regarding Rasayana, Aushadh kalpana, Pathya kalpana was done from classical and cur

rent texts. The whole data is compiled, analysed and discussed through and in depth

considerate about Nutraceuticals and Geriatrics from books and other authentic foundations.

### **Need of Nutraceutical in Geriatrics: -**

Vata Dosha is predominant during old age and there is gradual deterioration of all Dhatu, Veerya, Indriya, Ojas, Bala and Utsaha along with loss of hair, wrinkling of skin, chronic and recurrent cough, shortness of breath, inability to perform routine activities etc. There are changes taking place at physiological, psychological, immunological as well as cosmetologically level. Pollution, electromagnetic waves, etc. has enhanced the aging and degenerative changes. So, Nutraceuticals can meet the need of micronutrients and medicine.

### **Advantages of Nutraceutical in Geriatrics:-**

1. Agreeable to the palate or taste.
2. Effectiveness
3. Targeted Bioavailability
4. More nutrition in lesser amount
5. More Safety

### **Concept of Nutraceuticals in Ayurveda**

Nutraceuticals possess demonstrable benefits in management of chronic diseases and so they go similar with Ayurvedic principles of Aahara Kalpana, which can be explained with an example of medicated food i.e., Moong-dal-rice (Khichdi) cooked by adding Trikatu powder. It is mainly administered in fever as nutritional supplement and for increasing digestive fire in Agni Mandya condition. Ayurvedic concepts of Hita, Ahita, satmya, Asatmya, Pathyapathy can be correlated to the concept of nutraceuticals.<sup>3</sup> There is wise use of condiments like Ela, Marich, Dhanyak, Haridra etc. and Harit Varga Dravya like Rason, Ardra etc. It adds micronutrients, enhances digestion of food and accelerates the absorption of nutrients. Specific methods of preparation, time required for cooking, use of medicated water, use of banana leaf, specific utensils etc. also increase the nutritional quality of food.

According to Acharya Charka (C.Su. 5/31): A diet which besides providing the basic nutrition to the body, help to maintain the healthy state of the body and prevents the occurrence of the diseases should be consumed.

**Table Showing Some Examples of Nutraceuticals in Geriatrics in Ayurveda:**

SR.NO.	FORMULATIONS	NGREDIENT	BENEFITS
1.	Chyavanprash	Amalaki, Draksha, Ela, Twak, Patra, Madhu, Taila, Ghrita	Amalaki is rich source of Vit.C, Immunomodulatory, cytoprotective,



			hepatoprotective, hypolipemic activity, reduced postprandial glycaemia. <sup>4</sup>
2.	Brahma Rasayana	Haridra, Ela, Taila, Sarpi, Madhu	Antioxidant <sup>5</sup>
3.	Narasimha Rasayana		vigour and vitality
4.	Ashwagandha Ghrita	Ghee, Ksheer	nourishes the body and improves strength
5.	Brahmi Ghrita		For memory
6.	Panchagavya Ghrita	Ghee, Ksheer, Dadhi	It is a source of probiotics. Psychological disorders are managed.
7.	Pippali Ghrita	Ghee, Godugdha	Pleeha, yakrudroga, Agnimandya.
8.	Shatavari Ghrita	Ghee, Godugdha	Vataja roga, Shwas, Trishna, Raktapitta, Murccha
9.	Shunthi Ghrita	Ghee, Shunthi	Shotha, Grahani, Pandu
10.	Draksha Ghrita	Ghee, Draksha,	Draksha is called Phalottama <sup>[6]</sup> i.e. best among all the fruits. Beneficial in kamalaroga, gulma, panduroga, jwara, prameha, udar roga
11.	Changeri Ghrita	Ghee, Shunthi, Dhanya k, Dadhi	Kapha vataroga, grahani, arsha, anahua, gudabhamsha, mutrakrucchra
12.	Peya	Rice	Carbohydrates
13.	Vilepi	Rice	Carbohydrates
14.	Anna	Rice	Carbohydrates

15.	Krushra/Khiccha	Rice,Pulses	Carbohydrate, Protein
16.	Yusha	Pulses,Sunthi	Protein fromvegetables ource
17.	Mamasarasa	AnimalMeat	Protein from animalsource,fat
18.	Prakshepdavyas	Twak, ela, patra,nagkeshar,jati phalaetc.	Enhanceabsorption of nutrients andbioavailability ofnutritional
19.	ShilajatuRasayana	Shilajatu	fordiabetesmellitus
20.	AgastyaRasayana	Haritaki,Bilav	Forasthmaandb ronchitis
21.	AmalakiRasayana	Amalaki	Immunomodulatory andanti-oxidant

**TableShowingSomeSingleHerbalExamplesofNutraceuticalsinGeriatrics:-**

SR.NO	DRUG	BENEFITS
1.	Turmeric	Anti-cancerous
2.	Clove	Antioxidant
3.	Ginger	Anti-inflammatory
4.	Tulsi	Immunomodulatory
5.	Haritaki	Antioxidant
6.	Amalaki	Anti-inflammatory, Anti -diabetic, Anti-fungal,Anti-viral, Anti-bacterial
7.	Guduchi	Immunity booster, enhances memory,detoxification,antiagingproperties,liverfunctionbooster,healthrejuvenator
8.	Aswagandha	Reduce blood sugar level, anticancerproperties, stress and anxiety control, anti-depression, anti-inflammatory, improvebrainfunction and memory.
9.	Vridhadaru	Anti-diabetic, anti-microbial, anti-oxidant,anti-inflammatory,controlhypertension
10.	Nagabala	Demulcent,anti-acidic,expectorant,Antipyretic, diuretic, aphrodisiacCarminative,cardiacprop

		erties
11.	Nagadamana	Anti-inflammatory
12.	Shatavari	Antioxidant, Antiinflammatory

		Immunity booster, Diuretic Maintain blood sugar, Treat kidney stone Antiaging, Antidepressant
13.	Punarnava	Antispasmodic, Antimicrobial Anti-inflammatory
14.	Aparajita	Anti-inflammatory, Improve memory, Detoxifier, Cure neurological disorders
15.	Rasna	Anti-inflammatory, Analgesic
16.	Jivanti	Revitalizing, Rejuvenating, Lactogenic properties, Anticancer property
17.	Mandukaparni	Rejuvenator, Antioxidant, Antibacterial
18.	Shalaparni	Anthelmintic, Anti-catharrhal, Carminative, Diuretic, Expectorant, Anti-diarrheal

## **DISCUSSION**

- The concept of nutraceutical in Ayurveda can bring revolution in geriatric healthcare. In Ayurveda the concept of Nutraceutical may not be compared as such with any of its basic concepts. Ayurvedic concepts of Hita, Ahita, Satmya, Pathya pathyachara are correlated to the concept of Nutraceuticals.
- Acharya Charaka has mentioned Nitya Sevaniyadruvya which can be consumed by individual daily as these are considered as Shada Rasa Yukta Aahara (balanced diet).<sup>8</sup>
- Ayurveda gives importance to the intake of nutritious food and nutrient supplements by elderly people which helps to improve the strength (Bala), immunity (Vyadikshamatva) prevent ageing and degenerative changes due to ageing.
- Rasayana is a very broad concept from Ayurveda. Rasayana bestows longevity, immunity, youthfulness, memory, complexion, good voice and strength. Rasayana has action on body, mind and sense organs. Intake of rasayan slows down the degenerative changes.
- Ksheerapaka kalpana are palatable, nutritive, rich in proteins, calcium and fats. Balance between medicinal and nutritional value is maintained in Ksheerapaka kalpana.
- Ghrita extracts lipid soluble active principle from the drug and enhances drug absorption. Ghee has therapeutic values. Ghrita preparations are more palatable and pleasing with good odour.
- Nutraceutical may come under the concept of Pathya Ahara. The Pathya Kalpana (Ayurvedic dietetics) is mentioned for healthy as well as diseased person. Ahara

kalpanalikePeya,Vilepi,Manda,Yavagu.Ayurvedaprescribed28AushadhsiddhaYavagu for different diseased condition.

## **CONCLUSION**

In the present scenario of self-medication nutraceuticals play major role in therapeutic development. People grow older, they need fewer calories or more nutrients to maintain proper health. Numerous studies have demonstrated the effects of nutraceuticals from fruit or plant extracts in reducing oxidative damage and promoting healthy aging in invertebrate models. Therefore, Aging and Nutrition have a direct innate relationship with each other. Focusing more on Nutraceutical applications will be beneficial for the growth of Ayurveda.

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# **RASADRAVYAASRASAYANAINGERIATRICCAREAND CURE-withspecialreferencetoMakaradhwajarasa**

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## **ABSTRACT**

Rasashastra is one of the essential branches in Ayurvedic management of diseases as well as maintenance of health. There is a mention of chaturvidha rasayana in the classification of rasas. Out of these, kupipakwa rasayana is a popular and commonly used formulation. It is known for its quick action and minimum therapeutic dosage. Makaradhwaja rasa is one such Kupipakwa rasayana. It is renowned rejuvenator, immunomodulator and aphrodisiac and also used in several disorders. Hence, considered as a Rasayana drug. In today's world, owing to faulty eating habits and modified lifestyle symptoms of ageing like greying of hair, memory loss, low immunity etc are observed in early stages of life itself. In Ayurveda, Geriatrics is described under vriddhavastha or jeenavastha. The word ageing is described by the word Jara. Types of jara, its symptoms and management are also described. Ayurveda has a lot to contribute towards Jarachikitsa. Rasayana drugs can be effectively used to delay the early ageing signs and prove to be very effective in management of geriatric problems. In the present paper specific mode of action of Makaradhwaja rasa as a rasayana dravya in Geriatric care and cure has been discussed.

**KEYWORDS:** kupipakwa rasayana, makaradhwajarasa, geriatric, antiageing.

## **INTRODUCTION**

Geriatrics is a branch of medicine concerned with diagnosis, treatment and prevention of disease in older people and the problems specific to ageing. Ageing is both a complex and challenging scientific problem and a fact of universal concern. Human ageing process

ssinvolvesmultidimensionalchangesonphysical,psychological,culturalandsocial levels. These changes do not depend only on age , but are also seen in early stagesoflifeaswellinthepresenteraandarecalledasprematureageing.

In Ayurveda, ageing is described by the word Jara. Since the main aim of Ayurveda is not only to cure the disease but also to maintain health and longevity, it presents a good concept of ageing, process of delaying ageing and its management. Jara is an inseparable part of life. Ayurveda has contributed considerably in the field of Jarachikitsa. Jarachikitsa in Ayurveda is a method to slow down ageing in human beings during the later stages of life when degeneration of body tissues and senses occurs at an enhanced rate. Ayurveda advocates healthy ageing through rasayanachikitsa.

Makaradhwaja is a popular rasaushadhi (herbo-mineral compound formulation) prepared with Shodhita Swarna (gold), Parada (mercury), and Gandhaka (sulphur) by Kupipakwa method of preparation using Valukyantra in the ratio of 1:8:16, 1:8:24 or 1:8:48. It is a popular drug that enhances vigor and vitality. In the classical Rasashastra texts, Makaradhwaja is said to increase longevity of life and delay ageing process. It is a well-known aphrodisiac, immunomodulator, rejuvenator or drug used in treatment of several ailments as we<sup>11</sup>.

## **JARA ETYMOLOGY<sup>1</sup>**

The term JARA has been derived from the Sanskrit root word 'jru' which means decline stage or old age and can be explained as the muscles and other tissues being loosened under the influence of ageing. The word "Jara" also has a synonym "Visraha" which is derived from the root word 'sramsu adhipatane' which means degradation in physical, psychological and physiological well being.

## **AGEING AS PER AYURVEDA**

Ageing in Ayurveda is said to be the outcome of kala or parinama and is described under Svabhavabalapravrittavyadhi<sup>2</sup>- those diseases that are produced by the influence of nature.

Age is classified into 3—balyavastha, madhyamavastha and jeernavastha. Charakacharya<sup>3</sup> considers jeernavastha to be after 60 yrs and Sushruthacharya after 70 yrs.<sup>4</sup>

Acharya Sushrutha has explained the types of Jara for the first time. 1) Kalaja jara and 2) Akalaja jara<sup>5</sup>. Out of these, kalajajara is one that occurs at proper time and is inevitable. Akalajajara appears prematurely due to improper care and prevention.

## **FACTORS RESPONSIBLE FOR JARA**

1. Svabhavoparamavada (theory of natural destruction)
2. Kala
3. Shariravriddhikara bhava-abhava
4. Agni
5. Tridosha



6. Shrotasof sharira
7. shariradhatus

## **ETIOLOGY OF AKALAJAJARA**

1. Aharatmakahetu(diet)
2. Vikaratmakahetu(regimen)
3. Manasikahetu(psychological)

## **Symptoms of ageing<sup>6</sup>**

### **Physical symptoms**

- a. Vali(wrinkles)
- b. Palitya(premature greying of hair)
- c. khalitya(hair loss)
- d. Sukraapravartanam
- e. Ojaksaya(weakness)
- f. Mamsashaitilya(muscle weakness)
- g. Analpa meda
- h. Asamartachesta(inability to work)
2. Psychological symptoms
  - a. Medhahani(decreased intellect)
  - b. Avasannata and nairasya(depression)
  - c. Smritihani(loss of memory)
  - d. Utsahahani(decreased enthusiasm)
  - e. Buddhihani(deterioration in wisdom)

## **RASAYANA CHIKITSA**

The word Rasayana is made up of two words. „Rasa“ means `nutrition` and „Ayana“ means circulation throughout the body for its efficient assimilation into the body. In Ayurveda, there is incorporation of Rasayana Tantra as one of the eight disciplines of Astanga Ayurveda, which is exclusively devoted to geriatric healthcare.

Sushruthacharya has defined Rasayana as a branch of Astanga Ayurveda.

Rasayana therapy does not only mean rejuvenation or method for delayed ageing. Rasayana is a specialized procedure in the form of rejuvenative measures, dietary regimen and health promoting methods. Rasayana drugs primarily act on Rasadhatu,

Agni (improved digestion and metabolism) and Srotas (cleaning up the micro channels leading to better perfusion of tissue)

## **MAKARADHWAJARASA**

In ancient years the rishis practiced several alchemical procedures in the quest of achieving moksha. The Indian Alchemy was for two major purposes- dehavada and lohavada. Dehavada mainly was practiced for achieving longevity and ultimately to achieve Moksha. Many formulations were prepared to increase longevity and for rejuvenation. Makaradhwaja was one of them.

Makaradhwaja is a very popular drug in the Indian system of Medicine. It is used as a main aphrodisiac agent and rejuvenator and for treating a number of disorders.

The word Makaradhwaja is composed of two words. i.e. Makara which means crocodile and dhwaja which means flag. When the drug is used internally for therapeutic purposes, Makara stands for drug having aphrodisiac property and dhwaja stands for the resultant as a straight rod or flag pole. Makara and dhwaja also is a synonym of Kamadeva, the God of beauty.

## **METHOD OF PREPARATION<sup>7</sup>**

### **Ingredients**

1) Shuddha swarnapatra- 1

part 2) Shuddha parada – 8

parts 3) Shuddha gandhaka –

16 parts

### **Method of preparation**

Shuddha Swarna and Shuddha parada in equal quantities is taken in a khalvayantra and triturated well. It attains a butter like amalgam form with no shiny particles of gold. Later remaining parada and mentioned quantity of Gandhaka is added in the same khalvayantra and triturated continuously for 2 to 3 days until appropriate kajjali is formed. The kajjali is again subjected for 1 day bhavana with ghritakumari swarasa. The product obtained is carefully collected and filled into Mritaveshtita kachakupi, its mouth is closed with cork, placed firmly in valuka yantra to subject it for mrdu, madhyama and tiksnagni respectively for a day each.

The cork has to be removed soon after beginning of the heating process. Once, madhyamagni is applied for a day, fumes start appearing from the mouth of the bottle. In case the neck of the bottle gets blocked by the Gandhaka fumes, it has to be cleared with hot iron shalaka (rod) so that Gandhaka burns and moves out. Flames and fumes gradually subside indicating the completion of the medicine formation inside the

bottle. After getting suryodayalakshana, corking is done. Valuka around neck is removed and is

allowed to cool on it town. Next day, the bottle is broken carefully and Makaradhwajaras gathered at the neck of the bottle is collected .

**Dose:** ½-

**1ratti Rasa:**

**Avyakta Virya:**

Ushna

**Doshaghna:** Tridoshashamaka

**Varna:** Rakta

**Anupana:** Madhu and Tambulapatraswarasa

Therapeutic efficacy of Swarna Bhasma as described in Ayurvedic classics:

REFERENCES	GUNAS
Rasa Ratna Samucchaya <sup>9</sup>	Kshayahara, agnimandiyahara, ojo- dhatuvivardhana, balakara
Rasa Prakashasudhakara <sup>10</sup>	Saundaryakantivardhana, tridoshajarogahara
Ayurveda Prakasha <sup>11</sup>	Vrishya, Rasayana, Balya, Brumhana, Ayushya
Rasatarangini <sup>12</sup>	Vrishya, punsanopayogi
Rasamrita <sup>13</sup>	Rasayana, Vishaghna, Medhya

Some of the other properties are as follows: 14) Fr

ee radical scavenging activity

2) Anti-anxiety and anti-depressant

activity 3) Effect on modulation

## PROPERTIES OF SHUDDHAPARADA<sup>15</sup>

Parada has a property of „yogavahi“ which means it incorporates and enhances the properties of drugs with which it is used. Parada is best Rasayana for Dehavada (rejuvenation) as well as Dhatuvada (converting lower metals to noble metals).

Mritapara de issaid to bekshayasho shahara (relieves debility), balya (strengthens body), veerya

vridhikara(increases sexual desire), kantivardhaka(increases lustre),  
increasesstriramashaktiandviharaShakti(sexualvigour).

### **PROPERTIESOFSHUDDHAGANDHAKA<sup>16</sup>**

Gandhaka has katu rasa(pungent), usna veerya and madhura vipaka. It is rasayana,yogavahi , sutendriya veeryaprada (when added with parada , it enhances its therapeuticpower), aphrodisiac, alleviates kapha and vata. Here, excess Gandhaka is digested

insideParadatoformatherapeuticallyextremelyeffectivecompoundandistermedasgandhakajaranawhich playsanimportantroleindetoxificationofmercury.

WithoutGandhaka Jarana, Parada does not become therapeutically potent enough so it must be digested with Gandhaka inorder to make it highly effective and to achievepharmacologicalandtherapeuticproperties.

### **PROPERTIESOFBHAVANADRAVYA:**

Kumariswarasa17-kumariliterallymeans“younggirlorvirgin”asitimpartstheenergyofyouth.

Taste:tikta,kashaya,katuG

una:snigdha

Potency:sheeta

Karma:balya,vrishya,rasayanaP

ropertiesofAnupana:

1)Nagavalliswarasa<sup>18</sup>

karma:deepana,pachana,sugandhi,vrrushya2

)Madhu:<sup>19</sup>

karma:vrushya,yogavahi

### **DISCUSSION**

Vata, pitta and kapha are the3 importantentities(Tridoshas) responsible for themaintenance of health as well as production of diseases. Ageing is aslo related to thesetridoshas. The dominance of these doshas vary as per age, day, night etc . As per age ,Kapha dosha is dominant in childhood, Pitta dosha in middle age and Vata dosha in oldage. Vata dosha has gunas such as ruksha, laghu, sheeta, vishada . Hence, it decreases the lustre of the skin, bala and decays the body producing symptoms of ageing such as dry, wrinkled skin, greying of hair, decreased strength, muscle weakness etc. owing to itsnaturalproperties.

Apart from the tridoshas, agni is another factor in ageing process. Agni is responsible for conversion of dietary substances into tissue elements. As Vata gets vitiated it results in Vishamagni and affects digestion. This leads to undernourishment of tissues.

Oja is also responsible for resistance against diseases or vyadhikshmatva. So, dhatukshaya and dojakshaya together are also responsible for producing various age-related symptoms and ailments in old age. The vitiated vata dosha and vishamagni together lead to Shrotodushti. Shrotas in the body are responsible for transfer of body fluids. This in turn leads to early ageing process.

Rasayana therapy works on Agni which in turn leads to proper formation of Rasadidhatus. Hence it is necessary to nourish the ojas which is considered as prime essence of these rasadhatu. This causes proper working of immune system in terms of vyadhikshmatva. Hence, Rasayana plays a critical role in delaying ageing and also in combating geriatric problems and helps in maintaining health in old age. In other words, it helps in slow and graceful ageing with lesser ailments.

Herbal and mineral combination of rasaushadis makes the formulation potent enough to treat. It acts on the property of synergism wherein one drug potentiates the other. Bhavanasamskar with dravyas like kumari lead to possible formation of organometallic compound and converts heterogeneous form to homogeneous form. This process also helps in particle size reduction thereby increasing their bioavailability.

Nagavalli swarasa and Madhu as Anupana play a potent role in potentiating drug action through their Rasa, Virya, vipaka and Prabhava as well as improving roga and rogibala. These also help in palatability, mask any distaste, helps in easy administration, prevents irritation and controls adverse drug effect.

Makaradhwaja Rasa delays old age. It also improves jatharaagni and bala, alleviates valipalita, improves intellect, ayu, kanti and kama Shakti (potency) and is able to alleviate or decrease signs of ageing. Hence it can be effectively used in geriatric care and cure geriatric problems.<sup>20</sup>

## **CONCLUSION**

The main aim of Ayurveda is prevention of diseases and maintenance of health. For this, our Acharyas have given Rasayana therapy as the best remedy. Rasaushadis play a major role in Rasayana therapy. It is found that Makaradhwaja rasa when administered with suitable adjuvant like nagavalli swarasa and madhu exhibit balya, tridosha ghna and rasayana effect. Thus, it can be considered as an excellent remedy in geriatric care and cure.

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# A CRITICAL CLASSICAL REVIEW OF RASAUSHADHI'S INGERIATRICS

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## ABSTRACT

Geriatrics is a process of Physical, Psychological and social changes of person. In Ayurveda geriatrics is mentioned as Jarajanya vyadhi in which there is a gradual deterioration of Dhatus, Indriyas, Bala, Veerya and also a gradual depletion of functions like Grahana, Dharana, Smarana, Vachana, Vigyana etc.

Ayurveda has Rasayana to maintain health in geriatrics. The rasaushadhis as rasayan therapy helps to attain longevity, immunity, mental competence, physical strength, and increasing the qualities of dhatus. There are several rasaushadhis such as Abharaka, Makshika, Vimala, Shilajatu, Tuttha, Gandhaka, Suvarna, Rajata, Kanataloha, Vajra etc. which works as Rasayana, Ayushya, Balya, Pragyabodhi etc. Vaikranta & Makshika are mentioned as Rasayaneshusarveshu. Similarly Suvarna is mentioned for Dhatu Vivardhana. Several rasa formulations such as Vasantakusumakara rasa, Smritisagararasa, Brahma rasayan, Makaradhvja etc. are frequently used in geriatrics practice. In old age, Vata gets aggravated in various disorders, for this there are number of rasaushadhis such as Hartala, Manashila, Suvarna, Rajata, Kantaloha, Naga, Vanga etc. acting as Vataghna.

Prevalence of illness increases with the age whereas life expectancy decreases at the same time and rasaushadhis play a very important role in this preventing this. So we can say that rasaushadhis have a great role in geriatrics. Future ageing can be reduced before the occurrence of old age. Though many scientific advancements have come, still old age references of rasaushadhis have greater contribution in treating geriatrics disorders. The present work is an attempt to provide scientific classical documentation based on

prevention and management of age related medical problems that is geriatrics. The study is mainly concentrated on critical review of rasaushadhi in geriatric Problem.

**Keywords-**Rasaushadhi, Geriatrics

## **INTRODUCTION**

Ayurveda is the science of life practiced by ancient Aryans which is based on Atharva Veda. The “NEW INDIA” also needs to be “HEALTHY INDIA”, for that Ayurveda is playing a significant role. Ayurveda means “The Science of life” often called as “Mother of all healing or knowledge of life” and the Rasa Shastra is the potential branch of Ayurveda. In the modern ayurvedic practices the rasashastra has been considered more useful and effective when compared to the herbal preparations. It is said that rasashastra has immense therapeutic application some of which is geriatrics. Ageing is a complex multi-factorial and inevitable process. As per Ayurveda ageing is a Swabhavaja Vyadhi means it is inherent nature of living being to get old. Ageing is a natural process that begins at birth or to be more precise, at conception, a process that progresses throughout one’s life and ends at death. Constant predictable process that involves growth and development of living organisms unavoidably but how fast we get old varies from one person to another. How we age depends upon our genes, environmental influences, and lifestyle.

In Ayurveda Rasa Shastra considered as more effective and useful when it compared to herbal preparations. Rasa medicines have immense therapeutic applications, among them some are prevention of ageing and reduction in age related diseases.

## **AIM & OBJECTIVES**

The present work is an attempt to provide scientific classical documentation based on prevention and management of age related medical problems that is geriatrics. The study is mainly concentrated on critical review of rasaushadhi in geriatric Problem.

## **RASAUSHADHI’S**

Rasa Shastra is a branch of Ayurveda deals with Rasarasayana. Rasa Shastra incorporates not only Rasa, but also Maharasa, Uparasa, and Sadarana Rasa etc. Hence the formulation which consists above as one of the constituents can be termed as Rasaushadhi. Importance of rasaushadhi are

- \* Very quick in action.
- \* Small dose is required as compared to herbal dose.
- \* Easy to take, so patient’s acceptability is more.
- \* Long shelf life as compared to herbal medicines

## **GERIATRICS**

In the society everyone over age of 65 is designated as elderly whereas some of the authorities consider the field of geriatrics to keep this age over 75 years. With advancing age multiple disease and nutritional problems are the varieties of reason involved with elderly people. The functional capacity of most of the major organ systems show a decline, beginning in young adulthood and continuing throughout life.

Among the elderly population the dependency due to physical and mental disability is the major factor responsible for the adverse effect of life and Healthcare. Dementia, delirium, anxiety, depression including various cardiovascular function rapidly deteriorates due to ageing process and as a result elderly population extensively use Medical and personal care services. A number of changes takes place in the brain during ageing at molecular, cellular, structural and functional level.

Geriatrics or geriatric medicine is a speciality that focuses on health care of elderly people. It aims to promote health by preventing and treating diseases and disabilities in older adults.

Ageing is the process that occurs during life which culminates in changes that decrease an individual's ability to cope with biological changes. The rise in elderly population world over including India, it is now felt necessary to develop newer strategies for geriatric healthcare.

Ayurveda has a focused branch called Rasayana which deals with the problems related to ageing and method to cure them. It is a unique therapeutic methodology delaying ageing and related problems.

## **AYURVEDIC CONCEPT BEHIND GERIATRICS**

In Ayurveda, the phenomenon of ageing is also related to the principle of Tridosha. The tridosha (vata, pitta and kapha) is the most important factor in maintenance of good health and production of disease. During childhood kapha dosha predominates, in the middle age pitta dosha and in the older age vata dosha is said to be dominant. The properties of vata dosha are described as ruksha, laghu, sheeta, khara and vishada. So Vata dosha by nature, decreases luster of skin, lessens body strength, dries and decays the body and hastens ageing process. Thus the process of ageing can be evaluated in terms of the tridosha physiology. Apart from doshas, Agni also plays an important part in ageing process. Body tissues are regularly nourished by dietary substances and agni is said to be responsible for the conversion of dietary substances into tissue elements. In old age, more vitiation of vata dosha occurs which is responsible for vishamagni which affects the digestion and creating under nourishment of the tissues. This under nourishment of the tissues may have an impact on low status of dhatvagni which creates diseases in people. Due to dhatwagnimandya, poshak dhatu formation gets affected. As

are result of which, the

essence of all dhatus, the Oja is decreased. Oja kshaya leads to the molecular & cellular injury which exceeds their repair capacity and further accelerating the Aging process.

Anti-aging care is important for prevention and management of health problems. It helps to improve quality of life and make us independent for performing our daily activities. Ayurveda advocates wonderful approach to delay Kala-jara (natural ageing) and to avoid Akala-jara (premature ageing). Ayurveda gives primary importance to preventive and promotive healthcare and the maintenance of positive health.

Acharya Charak described Vayasthapanana gana which is having power of rejuvenation. This gana contains drugs which have Rasayana properties that help to inhibit tissue degeneration and stop progress of disease. The drug, which sustains the youth stage and prevents the Aging process, is called as Vayasthapanana. Acharya Charak mentioned Vayasthapanana Mahakashaya dravyas in Sutrasthana contains Amrita, Abhaya, Dhatri, Mukta, Sveta, Jivanti, Atirasa, Mandukaparni, Sthira, and Punarnava. These have been proven for their anti-ageing effect by various researches.

The physiological changes of ageing are elaborated in Ayurveda. Acharya Charak mentioned old age above 60 years. Vata Dosha is predominant during old age as per the fundamental principle of Tridosha. During old age there is gradual decline of all the Dhatu, Veerya, Indriya, Ojas, Bala and Utsaha along with loss of hair, wrinkling of skin, chronic and recurrent cough, shortness of breath, inability to perform routine activities etc.

### **RASAUSHADHI'S USE IN GERIATRICS**

The detail description of rasaushadhi, which can be used in different condition of Geriatrics are as follows.

### **RASAUSHADHI'S HAVING RASAYANA GUNA**

Here there is list of rasaushadhi's, which are specially mentioned as rasayana according to our basic classic of rasashastra. Any of them according to our needs, can be used in patient. Among them Abharaka, Makshika, Kantalo, Gandhaka, Suvarna, Rajata, Vanga, Shilajatu are more potent and frequently used in daily routine practices.

S.NO.	NAME	RASARATANA SAMUCHCHAYA	RASATARANGINI	AYURVED PRAKASHA
1.	ABHARAKA	+	+	+
2.	TUTTHA	+	+	
3.	GANDHAKA	+	+	+
4.	NEELANJANA	+		
5.	KANKUSHTHA	+		

6.	HINGULA	+		
7.	RAJATA	+	+	
8.	KANTALOA	+		
9.	RAJAVARTA	+	+	
10.	SURYAKANTA		+	+
11.	MAKSHIKA		+	+
12.	HARATALA		+	
13.	MANAHSHILA		+	
14.	SUVARNA		+	+
15.	VANGA		+	
16.	MANIKYA		+	
17.	VAJRA		+	
18.	SHILAJATU			+
19.	RASANJANA			+

### **RASAYANESHUSARVESHU**

This is the list of those rashushadhi"s which are mentioned as best rasayana among allrashushadhi"s..For maximum requirement of rasayanaproperties, we can use these three.

S.NO.	NAME	RASA RATNASAMCH CHAYA	RASATARA NGINI	AYURVEDP RAKASHA
1.	VAIKRANTA	+		
2.	MAKSHIKA	+		
3.	MANAHSHILA	+		

### **BALYASET SOFRASHUSHADHI'S**

Old age people gets not only sharira dhorbalyta but also shows dhatu dhorbalyta. For subsidizing these type of side-effect we can prescribe these balyarashushadhi"s for enhancing the balya of a person by both way that is sharira dhorbalyta & dhatu dhorbalyta.

NO.	NAME	RASARATANA SAMUCHCHAYA	RASATARA NGINI	AYURVEDP RAKASHA
1.	ABHRAKA	+	+	
2.	VAIKRANTA	+		
3.	SUVARNA	+	+	+
4.	RAJATA	+	+	
5.	KANTALOA	+	+	+

6.	VAIDURYA	+		+
7.	TUTTHA		+	
8.	KASISA		+	
9.	HINGULA		+	
10.	NAGA		+	+
11.	YASADA		+	
12.	MUKASUKTI		+	+
13.	PRAVAL		+	
14.	PANNA		+	
15.	VAJRA		+	
16.	NEELAMA		+	
17.	SPATIKA		+	
18.	GODANTI		+	
19.	SANKHA		+	
20.	TANKANA		+	
21.	VANGA			+

### **VRIGHANASETOFRASHUSHADHI'S**

The term Vrighana doesn't means only to increase the body weight buy also the increment of dhatu, dosha, bala and virya required for a person. In elderly people due to various causes these have to be managed. For that, there are some rashushadhi's which specially have as vrighana property.

NO.	NAME	RASARATANA SAMUCHCHAYA	RASATARANGINI	AYURVEDPRAKASHA
1.	SUVARNA	+		+
2.	PUSHPARAGA		+	
3.	VAIDURYA		+	
4.	RAJAVARTA		+	
5.	TAMRA			+
6.	VANGA			+

### **OJOVARDAKASETSOFRASAUSHADHI'S**

According to Ayurveda, Ojas is a essence present in every dhatu, and considered as Sara of all the seven dhatus starting from rasa to sukra and responsible for strength of body. In elderly people ojas gets decreased due to several disease, we can enhance the ojas of persons specially by giving these rashushadhi's mentioned as ojavardhak rashushadhi.

S.NO.	NAME	RASA RATANASAMUCH CHAYA	RASATARANGINI	AYURVEDPRAKASHA
1.	HARATALA	+		
2.	PANNA	+	+	



3.	SUVARNA		+	
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### **SNIGHDHAGUNAVARDHANARASAUSHADHI'S**

Snighdhta is property of kapha dosha, and later stages of life this property gradually decreases causing increased level of ruksha guna, which further causes several old

age related disorders. For providing snighdhaguna to person, these rashushadhi's can be used.

S.NO.	NAME	RASARATNA SAMUCHCHAYA	RASATARANGINI	AYURVEDA PRAKASHA
1.	ABHAKA	+	+	
2.	CHAPALA	+		
3.	GAIRIKA	+		+
4.	SPATIKA	+	+	
5.	HARATALA	+	+	+
6.	GOURIPASANA	+	+	
7.	SUVARNA	+		+
8.	RAJATA	+		+
9.	MANASHILA		+	+
10.	NAVASADAR		+	
11.	NAGA		+	
12.	MANIKYA		+	
13.	CHANDRAKANA TA		+	+
14.	VIMALA			+
15.	STROTANJANA	+		+
16.	SAUVIRANJANA			+
17.	NILANJANA			+

### **VATAGHNA SETSO F RASAUSHADHI'S**

In old aged people, due to naturally aggravating vata dosha, dhatu kshaya, indriyakshaya, viryakshaya etc. causing the prakopa of vata dosha resulting in different set of vata vyadhis. For minimizing or controlling, rasa shashtra classics provided a wide range of rashushadhis's, can be named as vataghana rashushadhi's-

S.NO.	NAME	RASA RATNA SAMUCH CHAYA	RASATARANGINI	AYURVEDA PRAKASHA
1.	HARATALA	+		
2.	MANASHILA	+		
3.	RAJATA	+	+	
4.	KANATALOHA	+		+
5.	RAJAVARTA	+		
6.	SUVARNA		+	

7.	VANGA		+	
8.	NAGA		+	
9.	KAMASYA		+	
10.	TANKANA		+	
11.	GOMEDA			+

### **DHATUVIVARDHANASETFRASAUSHADHI'S**

Suvarna is special property of dhatu vivardhana means for enhancing or improving the suppressed dhatu, Suvarna can be used as mentioned by Rasaratna Samuchchaya.

S.NO.	NAME	RASARATNA SAMUCHCHAYA	RASATARANGINI	AYURVEDAPRAKASHA
1.	SUVARNA	+		

### **SARVAVAYADHI HARSET OF RASAUSHADHI'S:-**

Gradually increase in age causes several diseases now a days. Due to low immunity, disturbed life style, stress etc. A person gets severe disease at later stage of life and for these disorders, Rasashastra has mentioned these Rasashushadhi's as Sarvavayadhihar.

S.NO.	NAME	RASARATNA SAMUCHCHAYA	RASATARANGINI	AYURVEDAPRAKASHA
1.	ABHRAKA	+		
2.	VAIKRANTA	+		
3.	MAKSHIKA	+		
4.	HINGULA	+		
5.	SUVARNA	+	+	
6.	RAJATA	+		
7.	KANATALOH A	+	+	
8.	VAJRA	+	+	
9.	GANDHAKA			+
10.	NAGA			+

### **AMRITTULYASET OF RASAUSHADHI'S**

There are some Rasashushadhi's mentioned as Amrittulya. These can be used frequently in different geriatric issues.

S.NO.	NAME	RASARATNA SAMUCHCHAYA	RASATARANGINI	AYURVEDAPRAKASHA
1.	ABHARAKA	+		
2.	MAKSHIKA	+		

3.	KANTALOHA	+		
4.	VAJRA	+	+	

### **AYUSHYASETOFRASAUSHADHI'S**

Geriatric major issue is decreased life span of person and for enhancing certain period of life span or improved quality of remaining life, these rasashushadhi's can be used.

S.NO.	NAME	RASARATNA SAMUCHCHAYA	RASATARANGINI	AYURVEDAPRAKASHA
1.	ABHARAKA	+	+	+
2.	VAIKRANTA	+		
3.	KANTALOHA		+	+
4.	RAJATA	+	+	+
5.	MOUTIKA SUKTI	+		+

### **PRAGYABHODHI/BUDDIVARDHAKSETOFRASAUSHADHI'S**

Among the elderly people dementia, depression, delirium and several neurological disorders take place. For these type of issues these rasashushadhi's can be used.

S.NO.	NAME	RASA RATNASAMUCH CHAYA	RASATARANGINI	AYURVEDAPRAKASHA
1.	ABHARAKA	+	+	
2.	VAIKRANTA	+		
3.	SUVARNA	+		+
4.	GOMEDA	+	+	
5.	VAIDURYA	+		
6.	HINGULA		+	
7.	YASADA		+	
8.	MUKTA SUKTI		+	
9.	VANGA			+

### **DISCUSSION&CONCLUSION**

Advancements in the field of rasa shastra attracts keen attention of the world with emphasis for greater and wide concentration on the preservation of health in which geriatrics problem are amongst one of main focused area for health sector. For geriatrics issues although there are many remedies are possible, but in this rasayana therapy are considered as best. According to rasashashtra these rasayana group of rasashushadhi mentioned as rasa rasayana and these rasa rasayana possesses immunomodulatory and antioxidant

effects in prevention of ailments, preservation of health and curative measures against disease including various psychomatic, chronic, degenerative, autoimmune

disorders. There are lots of rashushadhi"s mentioned in rasashastra classics amongst them Abhraka, Makhika, Shilajatu, Gandhaka, Suvarna, Rajata, Kanataloha, Vajra are those rashushadhi"s that can be used in numerous types of geriatric related problems.

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# **Review on cosmetology in Geriatrics**

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### **Abstract:**

In the developing field of geriatric aesthetics, healthful grooming may be considered as important as healthful eating, as our quality of life fades with lack of either. Geriatric aesthetics focuses on the specific physical and emotional needs of older adults. In Ayurvedic classics we will get the reference about cosmetology also. Beauty is a divine gift to human beings. Along with increased demand of beautification, the problems are also increasing which cause damage to Beauty or Personality due to changed life style and polluted atmosphere. The concept of beauty and cosmetics is as old as human civilization. In Ayurveda the concept of beauty has an age old origin. According to Ayurveda healthy skin is a result of overall health condition of individuals and prescribes numerous skin care treatment that needs to be pursued at every stage of life. So a study planned to review the concept of cosmetology in Geriatrics. (1,2,3)

**Keywords:** cosmetology, cosmetology enhancing steps, cosmetology in Ayurveda

### **Introduction**

Cosmetology is the study and application of beauty treatment. Branches of specialty include hairstyling, skincare, cosmetics, manicures/pedicures, non-permanent hair removal such as waxing and sugaring, and permanent hair removal processes such as electrolysis and intense pulsed light. The branch of medicine concerned with the diagnosis, treatment and prevention of disease in older people and the problems specific to aging. In the current era healthful grooming may be considered as important as healthful eating, as our quality of life fades with lack of either. Intrinsic aging processes include loss of skin elasticity and collagen, along with fat atrophy. Extrinsic factors, notably solar radiation, damage the dermis, with effects on collagen and elastic fibres. Other factors that can contribute to an aged appearance to the face include general poor health, an unhealthy diet, cigarette smoking, and alcohol. So to overcome all these difficulties, aesthetics are needed in this busy human life.

### **The aging Face (2,3)**

As people age, their concerns about their appearance increasingly focus on the face. For example, interviewed 24 women, 12 of whom had undergone cosmetic surgery,

and 12 of whom had not. Ages ranged from 29 to 75 years. The younger women were mostly concerned about the shape and appearance of their bodies, whilst the older women were preoccupied with their faces. In particular, the older women disliked wrinkles and droopings, and had undergone facelifts, chemical peels, and chin tucks.

What actually happens to facial appearance as we age, intrinsic aging processes include loss of skin elasticity and collagen, along with fat atrophy. Extrinsic factors, notably solar radiation, damage the dermis, with effects on collagen and elastic fibres. Other factors that can contribute to an aged appearance to the face include general poor health, an unhealthy diet, cigarette smoking, and alcohol.

Outline the signs of the aging face:

- Alined forehead;
- Drooping brows, with a hooded appearance to the lateral upper lid;
- Loss of cheek roundedness and deep nasolabial folds secondary to loss of subcutaneous fat ;
- Sagging neck lines consequent upon loss of platysma muscle tone;
- Loss of chin definition, from submental fat deposition;
- Drooping of the nasal tissues; and
- Wrinkling of the skin around the mouth, with thinning of the lips.

The aged appearance can be emphasized by other skin damage, such as melanocytic pigmentation, as well as hair loss. Loss of teeth can also make the contours of the mouth less defined.

These physical signs of facial aging are perceived by some people as a threat to self-continuity and are reacted to like a disease to be deplored and eradicated. Rather than being regarded as a completely natural time-ordered and predictable part of life, aging is increasingly represented as a pathological condition in need of correction or repair; a “disease”, which modern medicine must combat.

### **Cosmetic enhancement in geriatrics (1,2,3)**

#### **1. Botulinum toxin therapy**

More commonly known as Botox, Dysport or Xeomin, botulinum toxin injections help reduce frown lines (glabellar lines) in between the eyebrows and crow’s feet at the corners of the eyes. This treatment works by keeping the muscles in these areas from tightening. There is usually no recovery time for this cosmetic procedure, but it can take up to a week to see the effects. The results typically last about 3 to 4 months.

#### **2. Dermabrasion**

Used to treat wrinkles, age spots, and sun damage, dermabrasion uses a special rotating brush to remove the outer layer of the skin from small areas of the face.



New, smooth skin grows in to replace it. The new skin will look red or pink for a few weeks,

and you may have some scabbing or swelling for a few weeks after the treatment. It can take weeks or months to see the full results. You may need to take time off from work or other commitments. You may need only one treatment, but people with deep scars or significant signs of aging skin may need more than one dermabrasion.

### 3. Microdermabrasion

Like dermabrasion, this treatment removes the top-most layer of skin. But instead of a rotating brush, microdermabrasion uses a special machine to spray tiny particles on the skin. It is less abrasive than dermabrasion and takes less time to heal. It can be used on all skin types, but you may need several sessions to achieve the desired results. Many people include microdermabrasion as part of their anti-aging skin care routine.

### 4. Chemical Peels

During a chemical peel, your doctor uses an acid to peel away the outermost layer of skin. It removes age spots and wrinkles, and gives you a brighter skin tone. Your skin will need some time to heal after the peel and will appear red for a week or two. Depending on the type of peel, Fractional Laser Skin Resurfacing

For this treatment, your doctor uses a special laser to treat narrow columns of skin. The laser damages deep layers of skin, which stimulates new skin cell growth. The damaged areas peel away and reveal smoother, younger-looking skin. Fractional laser skin resurfacing can help treat wrinkles and fine lines. Although your skin will not likely need time to heal after fractional laser skin resurfacing, you may have some redness, pain, peeling or scabbing. You may need several treatments over a few weeks to get the results you want.

### 6. Dermal Fillers

Fillers are substances that a doctor injects into your skin to fill out wrinkles and lines. Some popular fillers include collagen, hyaluronic acid gel, and fat. You can use fillers on your lips, face and hands. In most cases, you don't need any downtime after getting a filler, and you will see the results right away. Fillers last from 2 months to 3 years, depending on what type you get. Collagen is one of the shortest lasting fillers, while injections of your own fat last 1 to 3 years.

### 7. Nonablative Skin Rejuvenation

Nonablative skin rejuvenation uses lasers and other types of energy to treat wrinkles, age spots, and loss of skin tone. This type of treatment does not remove the outer layer of skin, and you don't usually need any recovery time. You may need several treatments to achieve the best results, and it can take up to a few months to see the full effects.

#### Jara(4.5)

As per Ayurveda ageing is a Swabhawaja Vyadhi. Geriatrics or Jara Chikitsa of Ayurveda is a method to slow down or delay the process of ageing in human beings during the later stages of life when degeneration of body tissues and sense occurs at an enhanced rate. Ayurveda the eternal science explained that we have to protect and maintain our body from the childhood for a healthy Jara Life.

#### **Ayurveda concepts in cosmetology<sup>(4,5)</sup>**

The origins of Ayurvedic Cosmeceuticals date back to the Indus Valley Civilization. The use of cosmetics was not only directed towards developing an attractive external appearance, but towards achieving longevity with good health (Sanskrit - Aayush and Aarogyam). There is evidence of highly advanced concepts of self-beautification, and a large array of cosmetics used by both men and women in ancient India. Many of these practices depended on the season (Ritus) and were subtly interwoven with daily routine (Dinacharya). The whole range of cosmetic usage and its practice as conceived by the ancient Indians was based on natural resources. Nutricosmetics - Nutricosmetics is the term often used for nutritional cosmetics and relates to „eat and drink products in co-ordination with usual skin care routine for better overall results.

#### **Anti-aging cosmeceutical concepts in Ayurveda<sup>(8,9,10)</sup>**

According to Ayurveda, a number of factors determine skin health and youthfulness. These include proper moisture balance (Kapha in balance), effective functioning of the metabolic mechanisms that coordinate all the various chemical and hormonal reactions of the skin (Pitta in balance) and efficient circulation of blood and nutrients to the different layers of the skin (Vata in balance). The health of the following three dhatus (types of body tissue) are especially reflected in the skin: nutritional fluid (Rasa), blood (Rakta) and muscle (Mamsa). Rasa supports all the body tissues, particularly keeping the skin healthy, Rakta, in association with liver function, helps detoxify the skin of toxins, while Mamsa provides firmness to the skin. An effective Ayurvedic anti-aging cosmeceutical should provide support to all these three areas. Antiaging treatment includes two types of therapies Urjaskara (promotive) and Vyadhihara (curative). For Vata skin to stay youthful, skin care products that can nourish and rehydrate the skin should be used, otherwise it may be susceptible to wrinkles and premature aging. Warm oil self-massage and all natural moisturizers may help. For pitta skin, good sunscreens for protection from the sun, and good facial skin oils should be used daily. Tanning treatments and therapies that expose delicate sensitive skin for extended periods of time to steam/heat should be avoided. For kapha skin, a daily warm oil massage and cleansing of skin with gentle exfoliants should be performed.

#### **Anti-aging properties of Ayurvedic cosmeceutical ingredients<sup>(8,9,10,11)</sup>**

1. Age defying activity (Vayasthapana) – The ingredient that nourishes the skin and ensures its optimum physiological functions and has an overall anti-aging property is called *vayasthapana*, which literally means, „maintaining youthfulness“ or „arresting age“. *Vayasthapana* herbs give overall support to the skin by keeping all three doshas in balance. *Centella asiatica* (Gotu-Kola) is the foremost *vayasthapana* herb with anti-aging effects; one of its many properties is to enhance collagen synthesis.

2. Youthful Radiance (Varnya) – An important group of herbs called *Varnya*, has the ability to enhance the radiance or bright complexion of the skin. If the skin does not have a healthy glow, or *varnya* quality, then it is not considered youthful in Ayurveda. *Varnya* herbs include sandalwood, vetiver, Indian madder and Indian sarsaparilla and soon.

3. Protection from normal wear and tear (Sandhaniya) – *Sandhaniya* herbs help coalesce discontinued tissue, and in healing and regenerative functions of the skin, repairing effects of aging. „Sensitive Plant“ enhances healing and regeneration of the nerves by 30 to 40%.

4. Deep healing (*Vranaropana*) – *Vranaropana* herbs enhance deeper healing abilities in the skin. *Vranaropana* herbs include Gotu Kola and sensitive plant, and are known for their ability to heal wounds. 5. Enhancing and nurturing (*Tvachya*) – These herbs support moisture balance and provide overall nourishment to the skin. Gotu Kola, Silk Cotton Tree, Costus and Rose Petal are the most widely used. Grapefruit extract and natural sources of Vitamins A, C and E nourish the skin and enhance the value of herbs. Feeding the skin properly is very important to prevent it aging.

## **Conclusion** <sup>(12,13)</sup>

The aging process is a challenging human experience common to everyone, and the desire to look young prevails in the majority of us. The latest trends in beauty, health and wellness sectors are giving rise to a new realm of possibilities by fusing anti-aging cosmeceuticals with traditional Indian medicine –

Ayurveda. Ayurveda offers vast amounts of information on principles of anti-aging activity, skincare and anti-aging herbs, helping in the exploration of possibilities of developing new anti-aging cosmeceuticals with natural ingredients for topical applications. A number of cosmetic companies have used Ayurvedic knowledge for developing anti-aging cosmeceuticals. The future for beauty-from-within functional cosmetics that offer multifunctional benefits in the area of anti-oxidant cellular protection and skin health with anti-inflammatory and anti-stress properties is bright. Backed by sound science and substantiated structure and function, they will have a big market in the anti-aging cosmeceutical sector. This review may help cosmetic and personal care industry, marketers and modern scientists understand various different trends of potential use to research on anti-aging cosmeceutical approaches to delaying, defying, and preventing skin aging.

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# RASAUSHADHIINGERIATRICS

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## Abstract

Rasaushadhi means herbo metallic or herbo mineral formulations used for therapeutic purpose in Rasa Shastra. As in Rasa Aushadhi , the term rasa means Parada (mercury ) is having Shadarasa, Vrishya, Rasayana<sup>1</sup> properties, Rasa Aushadis are being backbone of Ayurveda due to its Rasayana properties... In Ayurveda, Jara Chikitsa (geriatrics) is an important branch to prevention and manage health problems of elderly people to improve quality of life and slowing down ageing process through Rasayana drugs. Majority of Rasaushadhi are having Parada, Gandhaka etc. rasa dravya. Various texts have

mentioned various term for geriatric purpose by Jara Nashana, Rasayana, Jivret Varsha Shatam etc .

**Aim** – to find out Rasaushadhi used for geriatric purpose.

**Material and Method:** various Rasashatriya book were referred and find out the word Jara Nashana, Rasayana, Valipalita Nashana for geriatric care.

**Results and Discussion:** The review suggest that since 8<sup>th</sup> century there is concept of rasayana as a specialized branch of Ayurveda. Rasayana medicine is specially used for slowing down the process of ageing

## Introduction

Ayurveda is the science of life and longevity. Rasa Shastra can be described as Ayurvedic pharmaceuticals, which deals with the drugs of herbo metallic and herbo-mineral origin, their varieties, properties, processing techniques and their therapeutic uses.

**Geriatrics** – Branch of medicine that deals with the problems and diseases of old age and the medical care and treatment of ageing people . Aging is associated with changes in dynamic biological, physiological, environmental, psychological, behavioural, and social

Complex multi-factorial and inevitable process. Ayurveda has a focused branch called Rasayana which deals with the problems related to ageing and methods to cure them. It is a unique therapeutic effective medicine that delays ageing and related problems.

As per Ayurveda ageing is a Swabhavaja Vyadhi means it is inherent. Ageing is a complex multifactorial and inevitable process, which begins before birth and continues throughout the entire life span. It is essentially a physiological phenomenon which results because of the evolutionary changes occurring in the mind-body system.

According to World Population prospects 2019 (United Nations, 2019), by 2050, 1 in 6 people in the world will be over the age of 65, up from 1 in 11 in 2019. As the incidence of elderly people is rising in the population world over including India, India's population in 2019 stood at 1.36 billion, growing from 942.2 million in 1994 and six per cent of India's population was of the age 65 and above. Globally there are an estimated 605 million people aged 60 years and above. From the morbidity point of view, almost 50% of the Indian elderly have chronic diseases and 5% suffer from immobility. In Ayurveda Rasa Shastra is considered as more effective even in small dose and more useful when it is compared to herbal preparations. Rasaushadhis have immense therapeutic applications, among them some are prevention of ageing and reduction in age-related diseases.

Rasaushadhi incorporates not only Rasa, but also Maharasa, Uparasa, and Sadharana Rasa etc. Hence the formulation which consists above as one of the constituents can be termed as Rasaushadhi.

#### **Benefits of Rasaushadhi:**

- Very quick in action
- Small dose required
- Long shelf life
- Broad spectrum mode of action
- Acts as a bio enhancer of other Kashta Aushadha Dravya

**Table 1. Showing types of Rasaushadhi**

SrNo	Types of Rasaushadhi	Example
1	Kharaliya	Shwasakuthara rasa
2	Parpati	Loha parpatitamraparpati
3	Kupipakva	Rasa sindura, mallasi sindura
4	Pottali	Hema garbhapottali, rasa garbhapottali
5	Bhasma and pishti	Abhaya bhasma, Makshika bhasma
6	Loha & Madura	Punarnava Madura,

In Ayurveda, Sarangadhara Samhita presents an interesting scheme of loss of different biological factors in different decades of life as function of ageing. It can provide a guideline for selecting specific protective Rasayana to retard ageing.

Srno	Decades	Age related Loss of biological factors
1	0-10	Loss of childhood
2	11-20	Loss of growth
3	21-30	Loss of complexion
4	31-40	Loss of intellect
5	41-50	Loss of skin texture
6	51-60	Loss of vision
7	61-70	Loss of virility
8	71-80	Loss of strength
9	81-90	Loss of cognitive power
10	91-100	Loss of locomotive ability

### **Concept of using Rasaushadhi as a Rasayana for Geriatrics**

In Rasa Shastra, there are a large number of medicines which are described as Rasayana. Apart from a number of combinations in Rasayanadhikara there are lot of compounds described in various other chapters that work principally as Rasayana but are better indicated in particular diseases. They mostly contain various substances having Rasayana property. Parada is considered to be very powerful medicine. When it properly processed, it balances Tridoshas, prevents diseases and old age. Nourishes vital parts of body.

### **Concept of Rasa Rasayana**

- The use of the term „Rasa“ and „Rasayana“ together is indicative of the fact that the „Rasaushadhis“ were prepared and consumed in the initial days (tantric period) only for Rasayana effect.
- Since „Rasastra“ originates from tantric cult, all the efforts put into the preparation of rasayana medicines were either for Rasayana or Vajikarana.
- The wide range of Rasa medicines prepared now, are having wider therapeutic applicability. They are known for their faster action in smaller doses, quicker assimilation, excellent therapeutic values, longer shelf life and easy preservation.

### **Method:**

In this study we have reviewed rasa texts like Rasa Tarangini, Rasamrita, Rasa Yoga Sagar, and we have mainly emphasized on Jara Nashana, Rasayana Vali Palita Nashana Dirghayu word for our review.



sr.no	name of formulation	major Rasa Dravya	Use	Reference
1	Rasasi ndura	Parada,Gandhaka	Rasayana	R.M <sup>1</sup> .1/33-39
2	Makaradhwaja	Parada Gandhaka , Svarna	Jaranashana	R.M.1/40-45
3	Ayaskriti	TikshnaLoha,	VarshaShatamaJivati	SU.CHI.10/4
4	Yogaraja	Loha Bhasma ,Makshika ,Raupya	Rasayana	R.M.3-185-190
5	Lakshmi vilasarasa	Abhraka,Parada,Gandhaka	Rasayana	R.M.9/171-75
6	Vasantkusu makararasa	Vanga.Loha,Abhraka,Mukta,Pravala	ShresthaRasayana	R.M.9/181-82
7	Sarvang sundara rasa	ParadaGandhaka	Jaranashana	R.S.S1/76-87
8	Mritasan jivanirasa	TamraBhasma	Rasayana	R.S.S. JVARA CHIKITSA
9	Purnachandrodaya rasa	Hartala,Loha , AbbhakraBhasma		RSS ATISARA CHIKITSA
10	Kanaka sinduro rasa	Parada,Gandhaka, Naga,Kharpara , MakshikaAbhraka Bhasma	Ayushya	RYSPart1–Kakaradi49-58
12	Kankavati vati	ParadaGandhaka, Hartala	Shatayushko	RYSPart1Kakaradi58-60
13	Karpura rasa <sup>19<sup>th</sup></sup>	Parada,Gairika	Rasayana	RYSPart1Ka 351-360
14	Karpurara sa <sup>23<sup>th</sup></sup>	Parada,Gairika,Khatika	Rasayana	RYSP-1 Ka373-385
15	Karpura rasa <sup>25<sup>th</sup></sup>	Parada Sphatika, Navsacara	Rasyana	RYSPart1Kakaradi396-402
16	Kasturi rasa	Loha Bhasma ,Gandhaka	Jararujanashana	RYSPart1Kakaradi588-90
17	Kasturyadi churna	Svarna,Rajata,PravalaBhasma	ShatamJivati	Rys Part 1Kakaradi591-93
18	Kantayoga	KantaBhasma	Dirghayu	RYSPart1Kakaradi641

19	Kantabhra rasayana	Kanta Loha Bhasma, Abhraka , Manahsila	Vardhakyajita	RYSPart1Kakaradi669
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21	Kantabhra rasayana <sub>3<sup>rd</sup></sub>	Abhraka, Kantaloha Bhasma, lohaSvarna Bhasma	Rasayana	RYSPart1Kakaradi671-76
22	Kamsu bdarig utika	SvarnaBhsma,Rsa Sindura,HirakaBh asma	Jarapaha	RYSPart1Kakaradi796-799
23	Kamagnisa ndipanomo daka	Parada Gandhaka  Abhraka	Valipalitansha na	RYSPart1Kakaradi800/807
24	Kalakantak a rasa 1 <sup>st</sup>	Parada,  Abhraka Bhasma	Jaramrityunash ana	RYSPart1Kakaradi902-904
25	Kalagniru drorasa	TamraBhasma	Vardhakyajita	RYSPart1Kakaradi1052-1060
26	Khegeshwa ri gutika	Tuttha,Parada	Jara Nashana	RYSPart1Kakaradi1530-37
27	Gandhaka kalpa 5	Parada Gandhaka, Abhraka	Jivet  Shatam Nara	RYSPart1Kakaradi1715-17
28	Gandhaka kalpa6	Parada Gandhaka,	JivetShabda shata	RYSPart1Kakaradi1718
29	Gandhaka kalpa 7	Parada Gandhaka,	Jaranashana	RYSPart1Kakaradi1720
30	Gandhaka kalpa 11	Parada Gandhaka,	Chirayu	RYSPart1Kakaradi1729
31	Gandhaka kalpa 19	Gandhaka	Dirghayu	RYSPart1Kakaradi1738
32	Gandhaka druti	Gandhaka	Valipalitanash ana	RYSPart1  Kakaradi 1755-1760
33	Gandhakap arpatirasa	Gandhaka	Jivet  Varsha Shata	RYSPart1Kakaradi1772-78
34	Gandhaka rasayana <sub>3<sup>rd</sup></sub>	Gandhaka	PanchaShatab davana	RYSPart1Kakaradi1803
35	Gandhakar asayana <sub>4<sup>th</sup></sub>	Gandhaka	JaraNashana	RYSPart1Kakaradi1804-1815
36	Gaganayas a rasayana	Gandhaka,	Rasayana	RYSPart1Kakaradi1638-42
37	Gandhaka loha	Gandhaka,LohaBh asma	DirghaAyu	RYSPart1Kakaradi1829
38	Gandhakad ipottalirasa	Gandhaka ,Hartala,Svarna makshika	Valipalitahara	RYSP1Kakaradi.16

39	Gandhamrita rasa	Parada ,Gandhak a	jaranashana	RYS PART 1 Kakaradi1870-71
40	Chandra prabha	Shilajit, LohaBhasma	Rasayana	RSS

	gutika			
41	Brihatvang eshvarrasa	ParadaGandhaka , Loha , AbhrakaBhasma , Svarna ,Vanga ,MuktaBhasma	Ayuvridhi	B.R. PRAMEHACHI KITSA
42	Chaturbhuj a Rasa	Rasa Sindura,Svarna BhasmaManahsila ,Hartala	ValiPalita	RSS UNMADACHI KITSA
43	Panchamrit a Rasa	Tamra, Loha,Svarna , TutthaBhasma	ValiPalita	RYSPart 2Pakaradi ,314
44	Paniya Bhakta Vati	Krishna Abhraka,LohaBh asma	JaraNashana	RYS Part2Pakaradi,4 45-46
45	Pushpadha nvaRasaya na	Parada, Naga,Loha , AbhrakaBhasm a	DirghaAyu	RYSPart2Pakaradi843
46	Pushpadha nvaRasaya naVriddha di	Svarna , Parada,Swarna MakshikaBhasma ,	Rasayana	RYSPart2Pakaradi8 90-95
47	Madana Janaka Rasa	Parada , KantaLoha, SvarnaAbhraka , SwarnaMakshiiia , RajataBhasma	Valipalita Nashana	RYSPart2Pakaradi2 262
48	MadanaM odaka1 <sup>st</sup>	Abhraka NagaBhasma	Valipalitanash ana	RYS Part par 2 Pakaradi2270-76
49	Khecharaba ddharasa	Tamra,Parada ,	Valipalitanash ana	RYSPART 1 kakaradi,1579-92
50	Tarunanada rassa	Parada,Gandhaka	Rasayana	RYS part 1takaradi ,12-23
51	Tamra parpati	Parada,Gandhaka	Rasayana	RYSPart1takaradi,73
52	Tamrayo ga22 <sup>nd</sup>	Tamra, Loha ,Parada,Gandhaka	Rasayana	RYS Part 1takaradi ,138-142
53	Tamrara sayana	Tamra,Gandhaka	Rasayana	RYS Part 1takaradi ,150-162
54	Tarasu ndarig utika	Rajata,Kantaloha , Abhraka , VangaBhasma	Dirghayu	RYS Part 1Takaradi ,232

### **ResultsandDiscussion:**

The review reveals that Rasaushadhi in geriatrics was mentioned in Rasa text forpreventiveandforgeriatricdisorders,majorityofformulationscontainingParada,Gandhaka , Abhraka and some formulations containing Tamra , Kharpara, Naga ,

Vangaetc.RasaDravyaintheformulations

**Conclusion:**

The Rasaushadhi's as Rasayana therapy helps to nourishes whole body and improves immune system. There are a large number of potent medicines in Rasa Shastra which are described as Rasayana. Undoubtedly, Rasaushadhi's as Rasayana strength of Ayurveda in the context of Geriatric care. It is the demand of the hour to develop an effective holistic protocol for geriatric care by combining Rasayana,

# SHILAJIT FOR LONGEVITY – A SCIENTIFIC APPROACH

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## **Abstract**

Ayurveda is considered to be one of the oldest medical system in the world. The nature of human is to aspire for longevity. Practically, this desire is found in all peoples of the world. So, if longevity is desired, then there must be a system of rejuvenation for one who keeps on remaining young. „Rasayanatantra“ is one among the eight branches in Ayurveda where systematic, scientific and fruitful results are claimed.

Shilajit is one of herbo-mineral drug which is widely practised in Ayurveda system of Medicines. It is a multi component natural occurring mineral, which is pale-brown to blackish-brown exudation of variable consistency exuding from layers of rocks in some mountain ranges of the world, especially the Himalayan and Hindukush range of India and Nepal. A complex mixture of plant, microbial metabolites, organic humic substances are found in it that occurs in the rock rhizospheres of its natural habitat. This mineral pitch is used as rejuvenator. Most oftenly used as kidney tonic and to increase the core energy of the body which is responsible for sexual and spiritual power. It has four rasa out of six i.e. pungent, bitter, salty, and astringent with hot potency.

This review article explores the use of Shilajit in the management of ageing and age related disorders. Hence, Shilajit has been reviewed in the various headings for longevity - with its uses, definition, types and formulations etc as this paper aims to explore the hidden treasure for healthy ageing.

**Keywords**—Ayurveda; Longevity; Shilajit

## **Introduction**

Shilajit is one of herbo-mineral drug which is widely used in Indian system of medicines. It is a multi component natural occurring mineral, which is pale-brown to blackish-brown exudation of variable consistency exuding from layers of rocks in some mountain ranges of the world, especially the Himalayan range of India, Tibet and Nepal altitudes between 2500 and 5000 m. A complex mixture of plant, microbial metabolites, organic humic substances are found in it that occurs in the rock rhizospheres of its natural habitat. There are some other terms used for Shilajit like Dhaturasa, Dhatusara, Shiladhatu etc, has been used in different classics. The word Shilajit is composed of two parts "Shila" means rock/mountain and "jit" means, „having won“. So, the literary



meaning is "Conqueror of mountains and destroyer of weakness" 2-6 The ancient Ayurvedic text, Charaka Samhita describes Shilajit as a cure for all diseases as well as a Rasayana (rejuvenator) that promises to increase longevity. Charaka Samhita describes it as "Stones of metal like gold" while Sushruta Samhita describes it as "A gelatinous substance." 7,8

Shilajit is brown to blackish organic matter exuded from steep rocks from mountainous regions of India, Russia, China, Pakistan, Nepal, Afghanistan and Tibet. It is a natural herbo-mineral substance with various bioactive constituents such as DBPs, DCPs, and fulvic acid. The humus consists of 60-80% organic matter and is bitter in taste with an odour like cow "surine." 9,10,11

### **Synonyms of Shilajit:**

Shilajit is also known by Shilajeet, Shilajatu, Silaras, Adrija, Girijatu, Kanmada, Shaileya etc (Dash 1991), The English name of shilajit is Mineral Pitch /vegetable asphalt while its botanical name is Black bitumen, Latin name is Asphaltum punjabianum. Shilajit is known by following vernacular names - Hindi, Gujarati and Marathi called as Silajita, in Persian it is known as Momiai Faqurual Yahud while in Arabic as hajar-ul-musa. In Odia and Bengali called as Silajatu and in Tamil is known as Uerangyum. In Nepali, shilajit is called as Kalo Shilajita and in Russian known as Mummio, Mumie.

### **Design: Literature Review**

### **Methods:**

The materials were researched with the term, "Shilajit" in Ayurvedic texts, Indian Materia Medica and other classics in relation to longevity. Various published research articles were also searched for this study and treatment aspect of all the relevant content is considered and analyzed to get a comprehensive concept on use of Shilajita as Rasayana.

### **Composition**

Shilajit is a highly viscous tar-like substance; chemically composed of 60-80% of humic substances like humic acids, humins, and fulvic acid. Several studies conclude that it comprises various bioactive components like hippuric acid, resin and waxes, fatty acids, and vegetable matter. Additionally, it contains phenolic lipids, iron, silica, lithium, copper, zinc, and many other metals. Its physical composition comprises 60-80% organic matter, 20-40% of mineral matter, and about 5% of trace elements. Trace elements are those elements that are present only for a limited period, especially in a particular environment or sample. Most probably, it is available in dark blackish-brown powder. But as we go deeper, many other types of Shilajit are present in reddish, whitish, and bluish. 12

## **Traditional use of Shilajit**

Traditionally, Shilajit is consumed by people from the north of India and Nepal and children usually take it with milk in their breakfast. The Sherpa claim to have Shilajit as a part of their diet, they constitute a population of strong men with very high level of healthy longevity. The traditional uses include its action in genitourinary disorders, enlarged spleen, epilepsy and haemorrhoids.<sup>13,14</sup> Shilajit is also used externally for sprain, bruises, stop the itching and oozing of skin diseases and for inflammatory swelling of the joints.<sup>15</sup>

## **Dosage**

There is not much scientific evidence to determine appropriate or standard dose of Shilajit. But the recommended dose is 300 to 500 milligrams per day. The availability of Shilajit as medicinal form includes capsules, powder, semisolid and liquid.<sup>16,17,18</sup>

### **Indications:**

- Shilajit has number of health benefits<sup>19,20</sup>
- Strengthens and rejuvenates the immune system
- Strengthens and cleanses the lungs
- Purifies blood
- Helps in removing the toxins from the body
- Helps maintain kidney function
- Maintains blood sugar levels
- Helps to maintain body weight
- Strengthens the reproductive system, toning both the male and female reproductive organs
- Useful in loss of libido
- Makes strong and healthy bones
- Improves vitality and stamina
- Healthy aging
- Removes excess fat and kapha

**Contraindications:** Shilajit is considered to be natural and safe, but it is contraindicated /should not be used in Hemochromatosis (high iron levels in the blood), Hypoglycaemia, High Uric acid levels<sup>21</sup> and best to avoid in pregnant and breastfeeding.

## **DISCUSSION**

Shilajit is a maharasa (super-vitalizer) in Ayurveda. It contains fulvic acids as the main components along with free and conjugated dibenzo- $\alpha$ -pyrones (DBPs; Urolithins) and more than 40 minerals and is included as an ingredient in a number of currently available nutritional supplements.<sup>22</sup> As it is rich in fulvic acid that makes it a strong

antioxidant and anti-inflammatory substance. This safeguards the body from cellular damages. Not only does this have, but it also assists in repairing and regenerating tissues. The high presence of fulvic acid acts as a shield against free radical damage. Also, it maintains the balance of calcium in the bones. Ultimately, better health and longevity are achieved, resulting in slowing aging. This systematic review found moderate to strong evidence for the reduction of pain, weakness, functional impairment, and joint stiffness through Shilajit. Whereas the contemporary medical science is more materialistic and having high dependence on the pharmacological interventions. This review finds that Shilajit is used in twenty Shastriya formulations and twenty-four proprietary drugs for extraneous indications. Major degenerative ailments are Diabetes, Cancer, heart diseases, osteoporosis, joint pains, Alzheimer's Parkinson's and other form of dementia. The extent to which aging process and degeneration has set in these days can be seen from the medical statistics. Shilajit contains 84 types of minerals in natural ionic form which are very vital for maintaining the equilibrium of energy metabolism in our body. The minerals in Shilajit are not similar to the mineral supplements available in market. These minerals are in ionic form and have previously been absorbed by rich plant life and returned back to earth. So they are easily absorbed by the body cells. Thus effectively arrests and reverses the aging process.

### **Medicinal Uses**

Shilajit is used for Diabetes, regulating the blood sugar level, improving pancreas function, purifying the blood, improving spleen function, strengthening digestion. It is also used for treatment of genito-urinary diseases, sexual weakness, gonorrhea, diabetes, chronic bronchitis, phthisis, asthma, gallstone, Leprosy, Epilepsy, Mental disorders, renal stone, anuria, jaundice, enlarged spleen and liver, and nervous diseases, improving metabolism, reducing fat, Filariasis, Cachexia, Fever, dissolving tumors, tuberculosis reducing tiredness, counteracting thirst, as a powerful rejuvenator, as a sexual enhancer. Chronic fatigue syndrome, Alzheimer's disease, sperm count, and high cholesterol. 23

### **CONCLUSION**

This review study demonstrates the importance of Shilajit as a safe and effective treatment option in ageing and geriatric disorders. From the above discussion it is clear that Shilajit has health benefits in promotion of longevity, rejuvenation, increase in physical strength, and antiaging activity (Pande et al., 2017). Further studies can establish the antioxidant property of Shilajit which may prove the immunomodulator action to establish its potential effect as rasayana. It can be concluded that Shilajit can be nectar for all human ailments.

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# REVIEW OF JARACHIKITS WITH RESPECT TO ASARATNASAMUCCHAYA

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## ABSTRACT

### Introduction:

Geriatrics is a speciality that focuses on health care of elderly people and aims to promote health by preventing and treating diseases and disabilities in old age group. There is an elderly population worldwide and it is now felt necessary to develop strategies for geriatric healthcare.

In Ayurveda, rasashastra is considered as more effective and useful. Rasaushadhis have immense therapeutic applications, among them some are shown for prevention in ageing and age-related diseases.

**Aim:** The study was taken with the view to enlist the rasayana formulations mentioned in Jararogachikitsa of Rasaratna Samuchaya.

### Material and methods:

Rasaushadhi mentioned under the context of Jararogachikitsa are enlisted. The formulations like Vardhakya-Udayadityarasa-Sarvarogahara-Tripurushayushkara-Triphala-Himadri-Pippalyadi-Shadanga-Kushtadihara-Jyotishmatitaila-Sarvarogantakaarasayana, Kantakantabrarasayana, Lakshmvilasasara, Kamalavilasasara, Tapyadivataka, Patadigritha, Narikelapaka, Pakshika-Masika-Shanmasika-Ashtamasika-Varshika—Trivarshikarasayanawere mentioned by Rasaratna Samuchaya.

**Results:** The author has mentioned 30 herbomineral formulations out of which Triphalarasayana, Lakshmvilasasara, pippalyadirasayana, are under practice.

**Conclusion:** Rasaushadhi mentioned in Jararogachikitsa as rasayana is strength of Ayurveda in the context of geriatric care.

**Keywords:** Rasayana, Geriatrics, Jara, Ayurveda, Rasaratnasamuchaya.

## **INTRODUCTION:**

The name geriatrics comes from the Greek words Geri- which means old age, andiatrics-which means care. It is a branch of medicine concerned with the prevention and management of aged people<sup>1</sup>. Aging is described as a series of natural changes in the body that eventually lead to death. It's also known as the inherent, unavoidable, and irreversible loss of viability that comes with age<sup>2</sup>. Our body is depicted in Ayurveda as a living entity where its undergoing wear and tear. Aging is a physiological action, similar to hunger, thirst, and sleep, rather than a medical disease.

Natural destructions are referred to as Swabhavoparamavada (Swabhava = natural and Upama = demolition). There is a cause for the equilibrium and nonequilibrium states of Rasadi Dhatu, but there is no cause for their destruction<sup>3</sup>.

Rasayana therapy is a unique therapeutic science that helps in delaying the ageing process and minimize the severity of illnesses that commonly affect the elderly. This is a unique restorative remedy in present era for preventing premature ageing and healing the signs of ageing; it also provides a healthy life span, including mental health and improved resistance to many geriatric illness conditions. Rasayana drugs also promote immunity, strength and intellect, and also strengthens the sensual organs, prolongation of life and helps in prevention of diseases.

Rasa shastra literally means to "Mercury Science." It is, however, a distinct branch of Ayurveda that deals primarily with materials known as 'Rasa dravyaas.' Rasa dravya has the following characteristics: immediate effectiveness, short dose requirements, and broad therapeutic value regardless of constitutional variation.

Vagbhata's Rasaratna Samuccaya, a 13th-century Iatrochemistry treatise, is a comprehensive compilation on the qualities of mineral and metallic medications and its therapeutic formulations. This text examines the state of Indian alchemical knowledge in terms of extraction, purification, and conversion of metals/minerals into therapeutically useful forms, as well as various instruments developed for alchemical purposes and the treatment of a variety of diseases with herbo-mineral preparations.

The purpose of this work is to summarise Rasayana formulations mentioned under the context of Jara chikitsa of Rasa Ratna Samuchhaya in order to highlight its importance and contribution to the development of Indian alchemy. The author here has mentioned various formulations out of which many are under practice.

## **OBJECTIVES:**

To study and summarize the contribution of Rasa Ratna Samuchhaya in Jara chikitsa.

## MATERIAL AND METHODS:

Chapter 26th of Rasa Ratna Samuchhaya deals with Jararoga chikitsa in the context of Rasayanadhikara. This chapter describes Jararoga, Rasayanasevana gunas, Vridhavastha and Jararogakarana. Enumerates 30 Rasayanayogas out of which some are under practice. Formulations which are mentioned as rasayanaa as been compiled here<sup>4</sup>.

Sl.no	FORMULATIONS	INGREDIENTS	BHAVANA DRAVYA	DOSE	ANUPA NA
1	Vardhakya Rasayana	Shu.Parada, ShuGandhaka	Hastiparni, Langali, Matsyakshi	1 Ratti	Trikatu churna, Madhu
2	Udayadityarasa	Shu.Parada, ShuGandhaka	Ardra swarasa	1 Ratti	Shuntichurna, Gritha
3	Sarvarogahara Rasayana	Shu.Parada, ShuGandhaka	Kakanaswarasa, Tambulapatrarasa, Datturapatrarasa, Meghanadarasa	1 Ratti	Madhu
4	Paakshika Rasayana	Shu.Shilajatu, Vidangha, LohaBhasma, Haritakichurna, Rasasindhura, Swarnamakshika Bhasma	Madhu, Gritha	1 gm	Goksheera
5	Maasika Rasayana	Shu.Parada, ShuGandhaka, Shu.Shilajatu, Amlavetasachurna	Madhu, Gritha	1-2 gm	Ksheera
6	Shanmaasika Rasayana	Shu.Parada, ShuGandhaka, Aparajita-Athisa-Ksheeranichurna,	Sthanya ksheera	4 Ratti	Tila, Madhu, Gritha
7	Ashtamaasika Rasayana	Jyotishmathimajja, Tilataila, Goksheera, Madhu, Swarnamakshika Bhasma, Karpooora, Twak, Jaatiphala	-	-	-
8	Vaarshika Rasayana	ShuGandhaka, LohaBhasma	Triphala kwatha	-	Madhu, Gritha



9	Trivaarshika Rasayana	TilatailainTamrap atra	-	-	Ksheera
10	Tripurushayushkara Rasayana	Tila taila, Gritha,Ksheera,	-	-	Ksheera
11	TriphalaRasayana-1	Triphala+Yastimadhu/Vamshalochana/Vidangha/Pippalli/Saindhavalavana	-	-	Madhu, Gritha
12	TriphalaRasayana-2	Triphala ,Vijayasarakwatha	-	-	Madhu
13	TriphalaRasayana-3	Triphalachurna	Khadirakwatha, Bringarajaswarasa, Asanakwatha,Vidanghakwatha, Sathalaswarasa	-	Guda, Madhu, Gritha
14	TriphalaRasayana-4	Triphala +Madhura jala inKantalohapaatra	-	-	-
15	HimadriRasayana	Jyotishmathi taila,Ksheera, Madhu,Gritha	-	-	Ksheera
16	PippalyadiRasayana	Vidangha,Triphala,Yastimadhu,PippaliSwarna Bhasma,LohaBhasma	-	-	Gritha
17	SahasravarshaayushkaraRasayana	Taila, Ksheera,Madhu,Gritha	-	-	-
18	Shadanga Rasayana	Rasasindhura,Swarnamakshika-Kantaloha-Abhraka Bhasma,Shu.Shilajatu,Shu.Vatsnabha	-	1-3 Ratti	-

19	Kushtadihara Rasayana	Shu.Tutha,Kantalo haBhasma	TriphalaKwat ha, Amlaswarasa, Rudravanthis warasa	3Ratti	Madhu, Gritha
20	Jyotishmatitaila Rasayana	Jyotishmathi taila,Shu.Gandhak a,Gritha	-	1Ratti-1Masha	Ksheera
21	Sarvarogantaka Rasayana	Kantaloha-Swarnamakshika-Abhraka Bhasma,Shu.Gug gulu-Shilajatu-Gairika,Trikatu-Triphala-Vidanga-Haridra-Devadaru-Punarnava-Chitraka-Musta-Ankolamoolachu rna	Bringaraja swarasa,	-	-
22	KaanthaRasayana-1	KantalohaBhasma ,Swarnamakshika-Abhraka-Swarna - Tamra-Vaikranta - Rajata Bhasma,Vidangha - Katukichurna	Jala	-	Devadar u Taila
23	KaanthaRasayana-2	Triphala churna,Kantaloha Bhasma	-	1Ratti	Mastu
24	KaanthaRasayana-3	KantalohaBhasm a, Trikatu,Vidangh a	-	-	Madhu, Gritha
25	Kaantabraka Rasayana	Abhraka Bhasma,Kantaloh aBhasma, SwarnaBhasma	Nimbhuswarasa ,Vasapatraswar asa, Mundiswarasa, Musalikwatha, Dashamulakwat ha	1Ratti	Triphala, Trikatu, Madhu, Gritha
26	Lakshmivilasarasa	Shu.Parada,Sh uGandhaka,	Bhringaraja swarasa,	1Ratti	Madhu, Gritha

		Tankana, Shu.Spatika, ShuKupilu, Marichachurna,	Ardrakaswaras a, Gunjamoola kwatha, Punarn avakwatha, Ya vani		
27	Kamalavilasarasa	Shu.Parada, Shu Gandhaka, Swarna Bhasma, Loha Bhasma, Abhraka Bhasma,	Kumari swarasa	1 Ratti	Triphala churna, Madhu
28	Tapyadivataka	Swarnamakshika Bhasma, AbhrakaBhasma, Shu.Shilajatu, Shu . Tankana, Kantalo haBhasma, Shu. Mandura churna, Shu. Tuth a, Trikatu, Ankola, Saindhav a	Bhringaraja swarasa	1 Ratti	Triphala churna, Madhu
29	Patadigritha	Palasha, Brahmiswarasa, Pata, Trivruth, Haridra, Amalaki,	-	-	Ksheera
30	Narikelapaka	Narikela, Karpasa majjaksheera, Var ahaikanda, Mushal ikanda, Shu. Dattur abeeja, Ahiphena, J atiphala, Lavangha, Ela	Ksheera	1 kshana	Ksheera

## **DISCUSSION:**

As one of the branches of Astanga Ayurveda, Jara chikitsa plays an essential role in geriatric care. As a preventive measure, it has a promising potential in the present era. Genetic and biochemical research over the last few decades has revealed an extensive array of molecular interactions implicated in the ageing process, implying that a Rasayana-based treatment strategy could be more effective at delaying or reversing the ageing process.

Ageing is considered as a natural and unavoidable process in Ayurveda, which offers time-tested Rasayan therapies for good ageing. As a result, healthy ageing would include the individual bringing in pleasant perceptions and incorporating healthy living practices and routines.

Rasayana therapy is a unique therapeutic science that promotes health and wellness, as well as promoting healthier transformation of the body and mind through amicable choices and actions. Rasayana therapy is a novel therapeutic science that helps to slow down the ageing process and reduce the severity of problems that arise during the old age of life.

### **CONCLUSION:**

The prevalence of geriatric-specific illness problems is rising as the elderly population is growing. This places a significant demand on health-care providers and the government. Traditional medicines or Rasayana therapy are the only remedies to the ailments. It is the responsibility of young health care professionals to research Ayurveda classics and Rasayana therapy in order to raise knowledge of Ayurveda's efficacy in geriatric care.

Rasaushadis mentioned under the context of Jara chikitsa in Rasadhikarana of Rasa Ratna Samuchhaya are simple and easy to prepare which have intense property of rasayana.

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# **RASAUSHADHISINGERIATRICS:ALITERARYREVIEW**

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## **ABSTRACT**

Geriatrics is a branch of medical science that deals with promoting health and preventing and treating diseases of ageing people. Ageing is an unavoidable natural process that involves growth and development throughout one's life till death. During old age there is gradual decline in strength, complexion, skin texture, intellect, vision, virility etc. of an individual. The most common diseases of geriatrics are arthritis, hypertension, diabetes, MI, flatulence, nocturia, hearing impairment, vision impairment, intellectual impairment, etc. These diseases lessen the life span of an elderly person and boost the process of ageing.

There is a special branch of Ayurveda which deals with the problems related with ageing or delays ageing called rasayana. Rasayana is a therapeutic methodology which uses different herbal, mineral and herbo-mineral formulations to delay ageing. Among these formulations which are prepared using parada (mercury) have immense therapeutic applications called as rasaushadhis. Rasaushadhis are very quick in action, a small dose is needed as compared to herbal medicine's dose, very easy to take so patients acceptability is more, has long shelf life, assimilation rate is faster. Rasaushadhis give long life, delay ageing, increase intelligence, memory and complexion. Major rasaushadhis indicated in geriatrics are; Suvarna bhasma indicated in prameha and is vrushya, abhakra bhasma indicated in impotency and memory loss, Suvarna makshika indicated in madhumeha and shukra kshaya, suvarnaraj vangeswar indicated in mutradaha and bahumutrata, Suvarna sutshekhar indicated in grahani and amlapitta, bruhatvatchintamani Rasa indicated in bhrama and pakshagata, mahalakshmi vilasa rasa indicated in kshaya roga etc.

**Keywords:** Rasaushadhis, Geriatrics, Rasayana.

## **INTRODUCTION**

Ayurveda is an Indian system of medical science that deals in treating and preventing diseases for maintenance of the health. The literal meaning of the word Ayurveda is “the

science of life". It helps in maintaining the equilibrium of both physical body and mind. Rasashastra is a branch of Ayurveda that deals with the preparation of medicines from plants, minerals, metals and animal products. The literal meaning of Rasashastra is "the science of Mercury". It is a specialized branch of Ayurveda which mainly deals with metals and minerals which are known as the Rasa Dravyas. Medicinal formulations prepared from rasa dravyas are called as Rasaushadhis. There are several rasaushadhis which play an important role in delaying ageing and acts as rasayana. Rasayana is a therapeutic methodology which uses different herbal, mineral and herbomineral formulations in maintaining health, increases longevity and delays ageing.

Formulations which are prepared using parada (mercury) have immense therapeutic applications called as rasaushadhis. Rasaushadhi is a boon of Ayurveda. It is very potent and has significant effect in treating different ailments. It works on the smallest body channels (srotas) and penetrates into the deepest parts of the body. The most important role of rasaushadhi is its potency, effectiveness and longevity. They are mostly tasteless, odourless and require only a miniscule to deliver a strong lasting effect.

Geriatrics is a branch of medical science that deals with promoting health and preventing and treating diseases of ageing people. Ageing is an unavoidable natural progressive process that involves growth and development throughout one's life till death. Ageing is an intrinsic age-related process of loss of viability and increase in vulnerability. Ageing is not a disease but a normal and inevitable biological phenomenon. A geriatric disorder seriously impairs the quality of life of majority of the elderly people. In geriatrics, the main problems faced by people are immobility, incontinence, incompetence, instability etc. Rasaushadhi have immense therapeutic applications in treating age-related problems and delaying ageing.

### **AIMS AND OBJECTIVES**

The present study aims to provide a scientific literature review on Rasaushadhi in geriatrics. This study is mainly focused on different problems of geriatrics and their management with rasaushadhi.

### **MATERIALS AND METHODS**

In this study, all the data are collected systematically from authentic classical texts to all the authentic scientific publications present regarding rasaushadhi and geriatrics.

### **PROBLEMS FACED BY ELDERLY PEOPLE**

Ageing is a gradual, continuous process of natural change that begins in early adulthood. In elderly, many bodily functions begin to change both physically and mentally. The bones tend to become less dense, weaker and more likely to break. The amount of muscle tissue and muscle strength tends to decrease as age increases. A vision impairment occurs causing loss of near vision, need for bright light, changes in colour

perception. A hearing impairment occurs causing high pitched sound hearing difficult called as presbycusis. The ability to taste smell gradually diminishes. The skin tends to be thinner, less elastic, drier and finely wrinkled. The heart and blood vessels become stiffer. The muscles used in breathing, such as diaphragm, tend to weaken. The cells of the immune system act more slowly. Memory loss (short term memory), absent mindedness are most common psychological effects of ageing. There is depression including sleep disturbance, lack of interest and energy, decreased concentration and loss of appetite. There may be social isolation, financial problems, loneliness etc.

## **GERIATRIC DISEASES**

The chronic diseases are most common age related conditions older adults experience. A few common geriatric diseases are Arthritis, Diabetes, Hypertension, CKD, COPD, Osteoporosis, Stroke, myocardial infarction, Dementia, Alzheimer's, Parkinson's etc. Arthritis causes joint pain and chronic inflammation. Diabetes occurs when the body is not able to produce enough insulin to ensure normal functioning. The most common diabetes is type II diabetes where the pancreas is no longer capable of producing the appropriate amount of insulin. Hypertension is a condition in which the force of the blood against the artery walls is too high. Chronic Kidney Disease (CKD) which is caused by kidney infections, kidney inflammation, high blood pressure, diabetes which may lead to kidney failure. Osteoporosis, where there is a reduction in bone density which is a most common condition in elderly people. Stroke occurs when the brain's vital blood flow is cut off which causes brain cells to die. Chronic diseases are persistent so they need regular care.

## **TREATMENT**

The above mentioned diseases lessen the life span of elderly person and boost the process of ageing. Therefore proper management should be made to deal with the problems faced by elderly people and to treat geriatric disorders. Rasayana is a part of Ayurveda that deals in maintaining health, increases longevity and delays ageing. Rasaushadhi has got immense therapeutic effects in treating geriatric diseases and also acts as rasayana. Rasaushadhi are very potent, very quick in action, a small dose is needed as compared to herbal medicine's dose, very easy to take so patients acceptability is more, has long shelf life, assimilation rate is faster.

Some of the rasaushadhis which will help in treating geriatric disorders and preventing them are;

- Laxmi Vilas rasa (Ref: Bhaishajya Ratnavali, rasayana adhikara)
- Rasa Sindoor (Ref: Rasa Tarangini 6/162-176)
- Makardhwaja (Ref: Bhaishajya Ratnavali, vajikarana adhikara)



- VasantKusumakarrasa(Ref:RasendraSaraSangraha,rasayanavajikaranaadhikara)
- SarvangaSundararasa(Ref:AyurvedaSaarSangraha)
- BruhatvataChintamanirasa(Ref:BhaishajyaRatnavali, VataavyadhiRogadhikara)
- Karpurra(Ref:BhaishajyaRatnavali,atisararogadhikara)
- GandhakaRasayana(Ref:Yogaratanakar,rasayanaadhikara)
- Chandraprabhavati(Ref:SharangdharSamhita,Madhyamakhandā-7)
- BruhatVangeshvarra(Ref:RasendraSara Sangraha,prameharogadhikar)
- Pushpadhanvarasa(Ref:BhaishajyaRatnavali,vajikaranaadhikara)
- TamraParpati(Ref:SiddhaYogaSangraha,atisara,pravahika,grahaniadhikara)
- RasaBhasma(Ref:RasaTarangini- 7/5-6)
- SuvarnaBhasma(Ref:RasaRatna Samuchhaya5/15)

### **PREVENTIVEASPECTS**

Nutrition plays an important role in prevention and treatment of geriatric diseases. Adequate nutrition and a well balanced diet is of vital importance in old age so as to prevent and control the common hazards of ageing. Ghruta and milk should be used regularly as ghruta is vayasapaka and milk acts as amruta for elderly. A regular walk or regular exercise will reduce the risk of geriatric diseases. Following dinacharya and rutucharya will maintain the health.

### **DISCUSSION**

The rasayana therapy by using rasaushadhi has got immense therapeutic effects on geriatric diseases and in delaying ageing. Rasaushadhis are very potent and have significant effects in treating various ailments. It is very quick in action, a small dose is needed as compared to herbal medicine, dose is very easy to take, patient acceptability is more, has long shelf life, assimilation rate is faster. It penetrates into the minutest and deepest parts of the body and shows excellent effects in treating various ailments. Ayurveda has got numerous formulations that act as rasayana which helps in delaying ageing and avoid geriatric diseases. It helps in maintaining the healthy and prosperous life.

### **CONCLUSION**

Rasaushadhi plays an important role in geriatrics by slowing the process of ageing and maintaining good quality of health. It gives longevity, increases intelligence, memory, complexion and immunity. It nourishes the body and strengthens the immune system. It helps greatly in the management of geriatric diseases and delaying ageing.

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# **Critical Study of Badam Pak with special reference to its Rasayana activity in Geriatrics**

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## **Abstract**

Geriatrics is a medical practice that addresses the complex needs of older patients and emphasizes maintaining functional independence even in the presence of chronic disease. Treatment of geriatric patients requires a different strategy and is very complex. In India, the population share of adults 60 years and above, grew 20.3 million in 1950 to more than 116 million today and study suggested that by 2050 more than 324 million individuals would be aged more than 60 years & above. According to Ayurveda, Jara is supposed to be a Swabhavajayadhi (natural disease) to slow down ageing process and its related complications Rasayanachikitsa is advised. For better well-being of human life and disease-free state Badam Pak the Avleha Kalpana mentioned in Ayurved Sar sangraha is advised for daily routine as a dietary factor.

## **AIM AND OBJECTIVE: -**

To study action of Badam Pak Avleha Kalpana as a Rasayana in geriatrics.

## **MATERIAL AND METHODS:-**

The Ayurvedic classics, research articles, online journals are thoroughly reviewed to compile relevant and scientific data about Badam Pak its ingredients and Geriatrics (Jara).

**OBSERVATION AND RESULT: -** The review of Ayurvedic classics, research articles, online journals have proved the antioxidant, neuroprotective, anxiolytic, tonic for brain, heart and blood vessel activity of the ingredients of Badam Pak.

**CONCLUSION:-**Badampakisaherbomineralformulation.This criticalreviewpresents collective knowledge of its pharmacological, therapeutic action and probable antioxidant, neuroprotective, anxiolytic, tonic for brain heart and blood vessel. Thus,badam pak can be safely prescribed to the patients suffering from Geriatrics (Jara) & its disorder.

**KEYWORDS:** - Avleha Kalpana, Antioxidant, Badam pak, Geriatrics, Jara, Rasayanachikista

## **INTRODUCTION:-**

In Ayurveda, Jara or Vardhakya is considered as a natural and inevitable process as well as Swabhavaj vyadhi (natural disease) <sup>[1]</sup>. Totally the term indicates the „loss“ in the period of life span. The common term coined for ageing in modern scientific word that is Geriatrics from ayurvedic point of view it can be correlated with Jara <sup>[2]</sup> or Vardhakya.

In India, the life expectancy at birth has improved vastly over the last few decades, increasing from 36.2 years in 1950 to 67.5 years in 2015 and projected to rise to 75.9 years by 2050.

Population shares of adults 60 and up, grew 20.3 million in 1950 to more than 116 million today and study suggested that by 2050 more than 324 million individuals aged more than 60 and above [3]. As India's population structure changes, so does its health profile. This is especially true for noncommunicable diseases (NCDs). NCDs include cardiovascular diseases, cancers, chronic respiratory diseases, diabetes, and eyesight conditions, the prevalence of which all increase with age. While infectious, nutritional, maternal, and perinatal conditions have traditionally represented the greatest health threats in India. Mental illnesses and substance abuse disorders have also been increasing among older age groups: between 1990 and 2013, mental illness and substance abuse disorders rose from 2.8% to 4% of the total morbidity burden among adults 50–69 years of age <sup>[4]</sup>

Although reliable data on the prevalence of mental illnesses can be difficult to acquire due to social stigma and lack of trained mental health professionals in many communities, particularly in lower income countries, evidence indicates that the burden of mental illness in India is far-reaching and comprehensive in nature. A study in India's southern states reports that the prevalence of mental illness among older adults may be as high as 27%, with depression, anxiety, bipolar disorder, dementia, and alcohol dependence predominating. [5] This growing burden of both physical and mental chronic illnesses has the potential to translate into staggering economic losses; a 2014 World Economic Forum report predicts that NCDs may cost India as much as \$4.3 trillion in productivity losses and healthcare expenditure between 2012 and 2030, a figure that is twice the country's annual GDP <sup>[6]</sup>

In Geriatrics common signs can be seen as development of wrinkles, greying of hair, constipation, insomnia, loss of skin tone, loss of libido, Cardiovascular problem, loss of teeth, loss of memory these are commonly seen factors in progressive ageing.<sup>[7]</sup>

Ayurveda has effective treatment for Jara (Vardhyakya) & its related complication. Badampaki is one of the avleha kalpanas mentioned in Ayurved Sarsangraha.<sup>[8]</sup> It contains Badam beeja, Cow ghee, Javitri, Jaiphal, Shunthi, Marich, Pippali, Lavang, Dalchini, Tejpan, Ela, Vidarikanda, Kaunch beeja, Jaiphal, Kamalgatta, Musali, Vanshalochan, Saffron, Rassindur, Vangabhasma and Pravalpishti.

The above-mentioned drugs have antioxidant, neuroprotective, anxiolytic, tonic for brain and heart which proves to be effective in preventing the signs of Jara and its complications. Thus, this paper will have a literary review about the antioxidant, neuroprotective, anxiolytic properties of Badampaki in Geriatrics (Jara).

## **MATERIAL AND METHOD LITERARY REVIEW-**

### **LITERATURE OF JARA FROM AYURVEDIC VIEW:**

The term Jara is derived from the Sanskrit word “Jr + Ana + Tap” which means the muscles and other tissues are loosened under the influence of ageing. Acharya Sushruta defines rasayana as a measure which prolongs and provides positive health, improves mental faculties and provides resistance and immunity against disease.<sup>[10]</sup> Acharya Charaka states that by which obtaining optimum nourishment to the dhatus are called rasayana.<sup>[11]</sup>

### **Sequential Kshaya in ageing**

Vagbhata and Sharangdhara presented an interesting scheme for the loss of different biological factors during the lifetime as a function of human being in different decades.

Decades	Year	Vagbhata <sup>[12]</sup>	Sharangdhara <sup>[13]</sup>
First	1-10	Balya	Balya
Second	11-20	Vrudhi	Vrudhi
Third	21-30	Prabha	Chavi
Fourth	31-40	Medha	Medha
Fifth	41-50	Twacha	Twacha
Sixth	51-60	Shukra	Drushti
Seven	61-70	Drushti	Shrukra

Eight	71-80	Shrotrendriya	Vikram
Nine	81-90	Manna	Bhuddhi
Ten	91-100	Sparshaindriya	Karmendriya

## According to Charaka & Sushruta

	Balya	Madhya	Vrudha
<b>Charaka</b> <sup>[14]</sup>	Aparipakwadhatu Birth to 16 year	30 year to 60 year	100 year
	Paripakwadhatu 16 year to 30 years		
<b>Sushruta</b> <sup>[15]</sup>	Kshiraad Birth to 1 year	Vruddhi 16 year – 20 year	Above 70 year
	Kshira and 1 year – 2 year	Yovana 20 year – 30 year	
	Annad 2 year – 16 year	Sampurna 30 year – 40 year	
		Haani 40 year – 70 year	

## Ageing and Tridosha changes in body<sup>[16]</sup>

Dosha	Balyaavastha	Madhyamavस्था	Vruddhaavastha
Vata	+	+	+
Pitta	+	+++	+
Kapha	+	++	+

Tridosha in normal condition structurally and functionally, maintain the normal body function but initiated time they caused diseases.

## Management<sup>[17]</sup>

Rasayan Chikitsa (Kutipravesika, Vatatapika), Kayachikitsa, Vrusha Chikitsa

## LITERATURE REVIEW OF DRUG FROM AYURVEDIC VIEW

### Badam Pak

**Ingredients:** - Badam beeja, Cow ghee, Javitri, Jaiphal, Shunthi, Marich, Pippali, Lavang, Dalchini, Teajpan, Ela, Vidarikanda, Kaunch beeja, Jaiphal, Kamalgatta, Musali, Vanshalochan, Saffron, Rassindur, Vangabhasma and Pravalpishti.

**Procedure:** - Badam beeja is finely grounded after that cow ghee is added in required amount and put on mandagni with continue stirring. After bhajana of badam beeja Sugaris added in the form of syrup, the mixture is put on fire and continuously stirred till it becomes thick pulpy. After swanga sheeta all prakshep dravyas are added in the given amount and lastly Ras sindur, Vanga bhasma and Pravalpishti are added.

**Dose:-1-2 tola(10-20gm)Anupana:-Godugdha, Water**

**Indication:-**Generalnervinetonicforimprovingmemoryretentionandconcentration, Mental Fatigue, Dementia and Alzheimer's disease, Eyesight weakness, Anaemia, Constipation.

HERBALDRUGS	LATINNAME	Quantity	RASA	VIRYA	VIPAKA	DOSHAGHNTA	KARMA
Badambeeja <sup>[18]</sup>	Prunus Amygdalus	2kg	Madhur	Ushna	Madhur	Vatahara, Pittahara,	Vrushya,
Sugar <sup>[19]</sup>	Saccharum Officinarum	4kg	Madhur	Sheet	Madhur	Vata,	Vrusha, Sheeta, Bruhana
Javitri <sup>[20]</sup>	Myristica Fragens	10gm	Tikta, Katu	Ushna	Katu	Vatahara, Kaphahara,	Vrusha, Deepana, Hrudya
Shunthi <sup>[21]</sup>	Zingiber Officinale	10gm	Katu	Ushna	Madhur	Vata kaphashamak	Aamghna, kasa, shwasa
Marich <sup>[22]</sup>	Piper Nigrum	10gm	Katu	Ushna	Katu	Vata kaphashamak	Krumighna, Kushta
Pippali <sup>[23]</sup>	Piper Longum	10gm	Katu	Anusheeta	Madhur	Vata kaphashamak	Shothaghna, Medhya, Shrukral
Lavang <sup>[24]</sup>	Syzygium Aromaticum	10gm	Katu, Tikta	Sheet	Katu	Kapha,	Mutral, Twacha, Kshayaghna
Dalchini <sup>[25]</sup>	Cinnamomum Zeylanicum	10gm	Katu, Tikta, Madhur	Ushna	Katu	Kaphavatasahmaka, Pittavardhak	Mukhashodhaka, shurkral, Jawaraghna
Teajpan <sup>[26]</sup>	Cinnamomum tamala	10gm	Katu, Tikta, Madhu	Ushna	Katu	Kapha vatasahmaka, Pittavardhak	Kasghna, Rajovriddhikar
Ela <sup>[27]</sup>	Elettaria Cardamomum	10gm	Katu, Madhur	Sheet	Madhur	Tridoshghna	Hrudya, Sheetkar, Kshyaghna
Vidarikanda <sup>[28]</sup>	Pueraria Tuberosa	10gm	Madhur	Sheet	Madhur	Vata	Stanyavrudhikar, Jawaraghna
Kaunchbeeja <sup>[29]</sup>	Mucuna Prurines	10gm	Madhur, Tikta	Ushna	Madhur	Vatashamka	Balya, Aartavajanna
Jaiphal <sup>[30]</sup>	Myristica Fragens	10gm	Tikta, Katu	Ushna	Katu	Kapha	Hrudya, Deepana, Shwasghna
Musali <sup>[31]</sup>	Asparagus Adscendes	10gm	Madhur	Sheet	Madhur	Kapha vardhak	Shrukral
KamalGatta <sup>[32]</sup>	Nelumbium Speciosum	10gm	Kashya, Tikta	Sheet	Katu	Kapha	Vedana sthapaka
Vanshalochan <sup>[33]</sup>	Bambusa Arundinacea	10gm	Madhur, Kashaya	Sheet	Madhur	Vatapitta shamka	Vrana ropak, Shothaghna
Saffron <sup>[34]</sup>	Crocus sativus	10gm	Katu, Tikta	Ushna	Katu	Tridoshghna	Varnya, Shrukral

PRANIJD RAVYA	QUANTITY	RASA	VIRYA	VIPAKA	DOSHAGHNTA	KARMA
Cow ssghee[35]	200 gm	Madhur	Sheet	Madhur	Pittaghana	Balya, Vrushya, Medhya

RASADRAVYA	QUANTITY	GUNA
RasSindur <sup>[36]</sup>	50gm	Jawaraghna, Kasaghna, Vajikarana, Tridoshaghna
VangaBhasma <sup>[37]</sup>	20gm	Medhya, Oojkara, Bruhaniya, Rasayana, Vajikarna, Stanyautpada
PravalPisht <sup>[38]</sup>	20gm	Sheetal, Netrya, Vishaghna, Tridoshghna, Shrukral, Varnya,

## LITERATUREREVIEWOFGERIATRICSFROMMODERNVIEW

The modern scientists also are proving in one way or other that it is possible to check the process of degeneration to some extent. The efforts in this direction come within the purview of geriatrics – a branch of the modern medical science which deals exclusively with the problem of the natural degeneration in the old age.

It is evident that in both developing and developed countries of the world, nutrition-modifiable disease is potentially responsible for a substantial portion of global deaths. Important areas of disease and disability in the ageing populations in which nutrition may play a role in prevention like dyslipidemia and heart-related problems; hypertension and stroke; cancer; reduced mobility accompanied by excess body weight with an increased risk of developing type 2 diabetes; Alzheimer's disease and other cognitive impairments including depression; physical deterioration of bones and joints associated with osteoporosis and arthritis; vision impairment problems including cataracts and macular degeneration; and an increased risk of pulmonary problems and infectious diseases.[39]

### The major theories of ageing like

- The free radical theory[40]
- The immunologic theory[41]
- The inflammation theory[42]
- Mitochondrial theory[43]

are all specific of a particular cause of ageing, providing useful and important insights for the understanding of physiological changes occurring with ageing.

## LITERATUREREVIEWOFAYURVEDICDRUG FROMMODERNVIEW

### Badam Beeja:-

1. An increased brain 5-HT turnover exhibited by almond-treated rats indicates an increased release of 5-HT in these rats and hence greater availability of 5-HT towards its respective receptors. The long-term administration of almond increased brain 5-HT metabolism by elevating TRP concentration and 5-HT



turnover in the brain and ultimately improved memory in rats.<sup>[44]</sup>

2. Almond also contains a number of polyphenolic compounds which have been shown to have antioxidant properties (Wijeratne et al., 2006). The specific antioxidant cellular mechanisms of almond on neuronal function related to attenuation of cognitive impairment following scopolamine injection are currently being investigated. Like the other antioxidant nutritional substances, it is likely that almonds may also provide a variety of bioactive compounds that show multiple effects on neural tissue that might reduce the oxidative stress and reverse the scopolamine-induced amnesia<sup>[45]</sup>
3. Almond skin has been found to be a rich source of antioxidants. Nine phenolic compounds have been identified in almond skin and eight of them exhibit strong antioxidant activity<sup>[46]</sup>.
4. Almond consumption has appealed to its overall health-promoting benefits including essential fatty acids and vitamin E. Clinical trial demonstrates that daily consumption of almonds significantly decreased wrinkle severity and wrinkle width in postmenopausal females<sup>[47]</sup>

**Rasa Sindur :-** Rasa sindura balance all tri dosha, its diminished effect of vata vyadhi, it gives balance to Nadi and sadhnyavahasan than. It acts as a Vajikarna, Erotic and Yogvahi,

**Vanga Bhasma:-** It acts as a Pramehaghna, Balya, Vrusha, Bruhaniya, Rasayana, Vajikarnya, Medhya, Oojasvi, Stanya utpadak. Krumhi, Kshaya, Shool, Gumlanashak.

**Praval Pishti:-**

Sheetal, Netrya, Tridosh ghna, Vrushya, Vishaghna, Shrukral, Viryavrudhikar, Raktapittanashak.

**Discussion:-**

The concept of ageing (Jara) has been dealt with, keeping in view of the Tridosas, Saptadhatu, Malas, Srotas, Indriyas, Agni and Ojas. When all of these are in homeostasis the body functions well. But due to old age, increase of Vata, vitiation of Pitta and decrease in Kapha causes an impact on the various other components of body, thus allowing the ageing to take over. NCDs include cardiovascular diseases, cancers, chronic respiratory diseases, diabetes, and eyesight conditions, the prevalence of which all increase with age. As age increases problem related human body also starts to increase. Badam pak is one of the avleha kalam mentioned in Ayurved Sarsangraha. Its individual content plays an important role in nutritional point. Badam beeja is a main ingredient in formulation, its daily consumption increased brain 5-HT metabolism by elevating TRP concentration and 5-HT turnover in the brain and ultimately improved memory in rats. Badam beeja also acts as an antioxidant. From ayurvedic point badam beeja having madhura rasa, madhura vipaka and ushna viryatna mak helpsto counter vata and pitta. Badam beeja mainly acts as Vrushya,

deepana and balya. Badam contain highest level of all essential vitamin and aminoacids in abundant quantity. It supposed to contain highest number of proteins, calcium and vit E. Cow ghee is act as a yogvahi having madhur rasa, madhur vipaka and sheetviryas it mainly acts as vrushya, deepana, rasayana & balya. Javitri, Shunthi, Marich, Pippali all this prakshep dravya having Vata hara, Kapha hara doshaghna and amahara, jwarahara and deepana property. Vidarikanda, Kaunchbeeja, Musali, Vanshalochana having kapha pitta ghna guna having shrukral, balya, kshyaghna, hrudya property. Ela & Saffron having tridosh ghna guna and act as Hrudya, shukral, varnya, sheetkar, kshyaghna.

Minerals like Rasa sindur, Praval pishti & Vanga bhasma as a rasa dravya having synergistic effect on kalpa. It collectively maintains tri dosha and normal body function. Rasa sindur itself act as rasayana and immunity booster. Vanga bhasma specifically indicated for Vajikarna, rasayana, oojkara and medhya. Praval pishti as sheeta guna tmak, netrya, virya vrudhikar and shrukral all above ingredients collective property act as rasayana and vajikarna.

Badampakavleha kalpana collectively improves individual qualitative life with strengthening all motor work of body. Gives strength to tackle geriatrics disorder like Alzheimer's disease, Mental fatigue, physical debility, headache, constipation and oxidative stress. With no side effect help to improve individual life.

### **Conclusion:-**

The Badampaki is one of the avleha Kalpanas which has antioxidant, neuroprotective, anxiolytic, tonic for brain and heart which proves to be effective in preventing the signs of Jara and its complications. Thus, Badampakavleha kalpana can be prescribed as a rasayana in geriatrics disorders.

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# AREVIEWONUTILITYOFKUPIPAKWAYOGASINGERIATRICDIS ORDERS

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## **ABSTRACT:**

**Introduction:** Aging is associated with a gradual loss of muscle mass, strength, and power, etc. The world's elderly population is increasing and the extended longevity and ultimately the rapid growth in the proportion of the elderly population. Rasayana is one of the eight facets of Ayurveda. Rasayana therapy delays aging and improves the quality of life. Rasashastra offers a pivotal role in rasayana. Most of the rasa dravya are said as rasayana, jaramrut yuhara, deha dardhyakara, etc.

**Materials & Methods:** A literary search through the literature of Rasashastra has put light on the use of Kupipakwa yoga for rasayana and addressing the ailments seen in jaravastha.

**Discussion:** Kupipakwa rasayana are murchita parada yogas that act as rasayana and also useful in managing an array of ailments particularly of old age. Rasasindura, Makaradhwaja, Ashtamurti rasayana, Swarnavanga, Suvarnabhupati Rasa, etc. are a few.

**Conclusion:** These rasayana act as jara nivarakata, vyadhi nivarakata and dhatu poshaka, ayu vardhaka. Rasayana dravya act as immuno modulators, help in regeneration of body tissues, replenish and improve the quality of life. Due to the combination of purified mercury and sulphur i.e., kajjali with other calyx of metals with different properties

like gold, silver, copper, iron, mica the formulations will be effective in alleviating the aggravated constituents of the body and also replenish and repair the bodily tissues

**KEYWORDS:** Kupipakwayoga, geriatrics, aging, rasashastra, rasayana

**INTRODUCTION:** Ayurveda is a system of medicine and is essentially being the science of life and longevity, geriatric health care is its prime concern which reflects well in its being one of the eight branches of Ashtanga Ayurveda. 1 Aging is associated with a gradual loss of muscle mass, strength, and power. 2

The world's elderly population is increasing and the extended longevity and ultimately the rapid growth in the proportion of the elderly population. 3 Jarachikitsa and Rasayana delay vrudhavaastha (ageing) and reduces geriatric degeneration. 4 Rasashastra



offers a pivotal role in rasayana. Most of the rasadravya as said in rasayana, jaramrut yuhara, deha dardhyakara, etc.

**Materials & Methods:** A literary search through the literature of Rasashastra has put light on the use of Kupipakwa yoga for rasayana and addressing the ailments seen in jaravastha.

Various kupipakwa yogas are mentioned as rasayana and many can be utilized in treatment of age related disorders. Kupipakwa yogas that are mentioned as rasayana are Rasasindura, makaradhwaja, Ashtamurti rasayana, swarnavanga, etc.

**Table 1: Kupipakwa yoga as rasayana**

Sl.No.	Name of the Yoga	Name of the ingredients	Dose	Indications
1	Haragourirasa <sup>5</sup>	Shuddha Parada- 8 parts Shuddha Gandhaka- 45 parts Abhraka satva- 4 parts Makshika satva- 4 parts Nagabhasma- 2 parts Swarna- 1 part	½ to 2 ratti	Jaravyadhi, jeernaroga, kshaya, dhatu
2	Tripura bhairava rasa <sup>6</sup>	Shuddha Parada- 10 parts Shuddha Gandhaka- 10 parts Shuddha Hingula Rasa Karpura- 10 parts Navasada- 1 part Shuddha Sphatika- 5 parts	½ to 2 ratti	Raktavikara, nadi vrana, pakshagata, sandhivata, ardita
3	Ashtamurti rasayana <sup>7</sup>	Shuddha Parada- 1 part Shuddha Gandhaka- 6 parts Shuddha Hingula- 1 part Shuddha Manahshila- 1 part Shuddha Tala- 1 part Shuddha Somala- 1 part Rasa Karpura- 9 parts Mrudharashringa- ½ part Shuddha Sphatika- 1 part Swarna- ½ part Rajata- ½ part	1-2 ratti	Kshaya, Murcha, Unmada, Apasmara, Mutraghata, Vatavikara
4	Swarnabhupati rasa <sup>8</sup>	Shuddha Parada- 1 part Shuddha Gandhaka- 1 part Tamra bhasma- 2 parts Abhraka bhasma- 1 part Loha bhasma- 1 part Kantalo habhasma- 1 part	2 ratti	Vatajarooga, dhanurvata, urusthamba, panguvata, kampavata, udavarta, alleviates the tridosha It is said that it is useful in all rogas

		Rajatabhasma-1part		
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		ShuddhaVatsanabha-1part		
5	Swarnavanga <sup>9</sup>	Shuddha Parada- 5 parts Shuddha Gandhaka- 5 parts Shuddha vanga- 5 parts ShuddhaNavasadara- 4parts Kalmisora-1 part	3 ratti	Increasesbala,am edha,agni Usefulinprameha,dha tu kshaya, mutkrichra,
6	Rasa sindura (Shadguna) <sup>10</sup>	Shuddha Parada- 1 part ShuddhaGandhaka- 16parts	2 ratti	Dhatuksheenata,Hrud ayaroga,prameha, kshaya, murcha, vataroga, pandu
7	Purnachandrodaya rasa <sup>11</sup>	Shuddha Parada- 20 parts Shuddha Gandhaka- 100parts Abhraka satva- 5 parts Swarnabhasma-2parts Swarnamakshika bhasma- 5parts	1/4 <sup>th</sup> to 1ratti	Hrudayapushtikara,ra sayana, balya, yogavahi.Usefulinraj ayakshma,dhatukshee nata,kshya,apasmara, etc.

Haragauri rasa (Swarna) is heart nourishing, efficacious in jeernaroga, dhatu kshaya,rasayanaandvajikarainaction.Rasasinduraincreasesthestrengthoftheheart;stimulate sbloodcirculation,increasesthmemoryandstrengthensthenerves.

The main function of Swarnavanga is to compensate for the damage of the body by nutrition. The damage caused by the daily physical trade is completed by the building of dhatu. In this way the dhatu samyata is maintained. On this equality lies the basis of health. But sometimes due to many different reasons this deficiency is not met, but gets depleted more and more. In this way, the quantity of dhatu in the body's blood also starts decreasing. Due to less production and more destruction every day, the body becomes dry. The ingredients of the yoga address the issue of building the dhatu.

Suvarnabhupati Rasa is beneficial in rheumatism, erectile dysfunction, paralysis, tremor, mandaagni, all kinds of colic, severe accumulation, diarrhoea, ashmari, obstruction, leprosy, aggravated kapha, vata predominant diseases, cough, dyspepsia, all types of fever, pandu, shiroroga, etc. are cured by taking it with favorable dosage.

Due to the combination of metals with different properties like gold, rupa, copper, iron and mica in Suvarna Bhupati, it is effective in quenching the disorders of all the three doshas - Vata, Pitta and Kapha.

Ashtamurti rasa is a rasayana, Shakti vardhaka, ojaskara, hrudaya uttejaka, Mamsavardhaka. Useful in disorders of kidney, lungs, heart.

A study to scientifically validate the free radical scavenging activity of classically prepared Rasasindura (Red sulphide of mercury) in rat's liver homogenate

with

four parameters like lipid peroxidation (LPO), superoxide dismutase (SOD), catalase (CAT)

and reduced glutathione (GSH) showed that there will be reduction in the malondialdehyde level (MDA), increase in catalase (CAT) and reduced glutathione (GSH), concentration of superoxide dismutase (SOD) represents a free radical scavenging activity of Rasasindura in different proportion i.e. 1, 2 and 5%.<sup>12</sup> A study has shown that Swarnavanga has significant hypoglycaemic effect in normoglycaemic rats.<sup>13</sup>

**DISCUSSION:** Kupipakwa rasayana are murchita parade yogas that act as rasayana and also useful in managing an array of ailments particularly of old age. Rasasindura, Ashtamurti rasayana, Swarnavanga, Suvarnabhupati Rasa, etc. are a few yogas that help in the management of geriatric ailments. The probable mode of action of these is that they are jaranivarakata, vyadhi nivarakata and dhatu poshaka, ayuvardhaka. Rasayana dravya act as immunomodulators, help in regeneration of body tissues, replenish and improve the quality of life.

**CONCLUSION:** These rasayanas act as jaranivarakata, vyadhi nivarakata and dhatu poshaka, ayuvardhaka. Rasayana dravya act as immuno modulators, help in regeneration of body tissues, replenish and improve the quality of life. Due to the combination of purified mercury and sulphur i.e., kajjali with other calyx of metals with different properties like gold, silver, copper, iron, mica the formulations will be effective in alleviating the aggravated constituents of the body and also replenish and repair the bodily tissues.

Rasayanam methodologically delay vrudhava stha (ageing) and reduce geriatric degeneration. Rasayana has broad meaning indicating qualitative and quantitative improvement of dhatu (tissues).

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# GRACEFUL MENOPAUSE WITH RASAUSHADHI

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## ABSTRACT

Menopause-a life transition not a disease. Right from the moment that she entered the world, or when she steps in adolescence which makes her capable to be prepared to experience motherhood, or finally the transition to menopause. Postmenopausal syndrome can be broadly classified into vasomotor symptoms, locomotory symptoms, urino-genital symptoms and Psycho-somatic symptoms. Rasaushadhis like Kamdugha Rasa may play a major role in combatting Postmenopausal symptoms. These formulations ease the symptoms of menopause. Hence an attempt has been to scientifically review and study mechanism of action of Kamdugha Rasa in Menopausal women to relieve stressful event in a Woman's Life.

**Keywords**—Menopause, Rasaushadhi, Calcium Compound, Kamdugha Rasa

## INTRODUCTION

Menopause is a transient phase in a Woman's Life. Menopause is the permanent cessation of menstruation resulting in the loss of ovarian follicle development. The age at menopause appears to be genetically determined and is unaffected by race, socioeconomic status, age at menarche, or number of prior ovulations<sup>1</sup>. Currently, the number of menopausal women is about 43 million and projected figures in 2026 have estimated to be 103 million. Menopause as a physiological process universally affects all women who reach midlife. Studies indicate that as women complete the transition to menopause, an estimated 85 percent report one or more symptoms, of which about ten percent seek medical help necessitating the need to find effective and safe alternatives<sup>2</sup>. Ayurveda is a science of life aiming at curative as well preventive treatment. Ayurvedic medicines work through holistic approach. Rasaushadhi is an eminent part of Indian Medicine. Kamdugha Rasa (KMR) is a herbo-mineral formulation categorized under Kharaliya Rasayan. It is widely used for formulation and may play a vital role in reducing the str

essful events in Peri-menopause, Menopause and Post-menopause condition.



## MENOPAUSAL SYNDROME

Menopausal transition, or 'perimenopause', is a defined period of time beginning with the onset of irregular menstrual cycles until the last menstrual period, and is marked by fluctuations in reproductive hormones<sup>2</sup>.

Menopause is defined retrospectively as the time of the final menstrual period, followed by 12 months of amenorrhea.

**Post-menopause describes the period following the final menses.**

Principal health concerns of menopausal women include vasomotor symptoms, urogenital atrophy, osteoporosis, cardiovascular disease, cancer, psychiatric symptoms, cognitive decline, and sexual problems. However, it has been difficult to distinguish between symptoms that result from loss of ovarian function and those from the aging process or from the socio-environmental stresses of midlife years. Many symptoms are found related to postmenopausal syndrome: Hot flashes, irritability, mood swings, insomnia, dry vagina, difficulty concentrating, mental confusion, stress incontinence, urge incontinence, osteoporotic symptoms, depression, headache, vasomotor symptoms, insomnia etc. They have been mentioned in Table 1.

**Table 1: Signs of Menopausal Syndrome<sup>2</sup>**

SYSTEM	SIGNS
Vasomotor	Hot flashes
UROGENITAL	Vaginal dryness, Pruritus, Dyspareunia, Dysuria, Urinary urgency, Incontinence, Decreased fertility
MUSCULOSKELETAL	Backache, fractures on minimal trauma, decreased height, and mobility are common due to osteoporosis.
PSYCHOSOMATIC	Anxiety, Depression, Memory loss, Insomnia, Irritability, Headache, Mental confusion, Stress

## MATERIALS AND METHOD

Here, an attempt is made to scientifically study mechanism of action of Kamdugha Rasa on Menopausal Syndrome.

### KAMDUGHARASA

Kamdugha Rasa is a herbo-mineral formulation mentioned in Rasayogasagar<sup>3</sup>. There are 3 references of Kamdugha Rasa mentioned in Table 2. It is mainly indicated in Amlapitta, Raktapitta, Pradara Roga, etc.

**TABLE2:Refrences ofKamdughaRasa3**

	<b>KMR-1</b>	<b>KMR-2</b>	<b>KMR-3</b>
<b>Ingredients</b>	SwarnaGairik	Guduchisatva – 4parts	Muktabhasma
	Amalakiswarasa- bhavanadravya	Swarna Gairika – 1part	
	-	Abarakbhasma-1 part	Muktashuktibhasma
	-	-	Kapardikbhasma
	-	-	Shankhabhasma
	-	-	Suvarna Gairik
<b>Dose</b>	6ratti	3ratti	2ratti
<b>Anupana</b>		Go dugdha, matsyaanda, tandulodak,sharkara, ghrita,madhu	Jeerakand sharkara

Among the three refrences of KMR 1 is most feasible and easy to prepare containing only2 drugs that is Swarna Gairika and Amalaki Swarasa. The KMR 2 is more potent andhaving yogavahi effect due to the presence of Abarak Bhasma and Guduchi Satva. TheKMR 3 is popular and widely accepted potent formulations. It contains all the Sudhavarga dravyas that is drugs possessing Calcium compound and Swarna Gairik whichpossessIron. ThepropertiesofalltheingredientsarediscussedinTable3.

**TABLE3: Ras,Guna, Karmadiof theContentsof KamdughaRas4, 5,6**

<b>Sr No.</b>	<b>Dravya</b>	<b>RASA</b>	<b>VIRYA</b>	<b>VIPAKA</b>	<b>GUNA</b>	<b>DOSHA</b>	<b>KARYA</b>
1.	Suvarna gairik	Madhura, Kashaya	Katu	Shita	Snigdha	Pittasha - mak, kinchitKapha Naashak	Netrya,dahanashak, vishaghna,vrana ropak,balya
2.	Mukta Bhasma	Madhura Kashaya	Madhura	Shita	-	Tridoshatma kspl pittashamak	Dipak,ruchikark
3.	Prawal Bhasma	Madhura, Kinchit mla,kashaya	Madhura	Shita	Laghu	Tridoshatma k splpittashamak	Dipan,pachan,vrushya, kantivardhak, netrya,vishanashak
4.	Shankha Bhasma	Tikta	Madhura	Shita	-	Kapha-pittaghna	Grahi, varnya,netraya,balya, vrushya,paushtik

5	Mukta-shukti Bhasma	Katu, madhura	Madhura	Ushna-shita	-	Vatakaphagna	Dipana, ruchikarak
6	Kapardik Bhama	Katu, Tikta	Madhura	Ushna-shita	-	Vatakaphagna	Dipana, pachan, netrya
7	Guduchi satva	Tikta, Kashaya	Madhura	Ushna	Guru, Snigdha	Tridoshamak	Dipana, pachan, pittasarak, anuloman, rakta shodhak, rasayan

## **MODE OF ACTION**

1. Praval Bhasma-shamak, shittvirya, mutral, raktaprasadak.
2. Mukta Bhasma-raktaprasadak, reduce stikshnata of rakta, shittvirya, mutral, shamak.
3. Shankha Bhasma-pachak, madhurya utpadak.
4. Kapardik Bhasma-pachak.
5. Mukta shukti Bhasma-shittvirya, stambhak, pachak.
6. Suvarna gairik Bhasma- stambhak, raktaprasadak, kshobhnashak.
7. Guduchi satva-jwaraghna, dahprashamana, pittashaman.

## **DISCUSSION**

Majority of dravya in KMR are pittashamaka and mutrala, thus reducing the symptoms of Hot flashes, dysuria, burning micturition and urinary incontinence. Shankha bhasma is pachaka in action and balances Agni thus helping in condition of preventing Dhatu kshaya. All ingredients accept Swarna Gairik and Guduchi satva is Calcium compound thus reducing the symptoms of Osteoporosis. The drug like Guduchi satva and Praval bhasma possess mind soothing effect and hence helps in reducing mental irritability, anxiety, mood swings and insomnia. Swarna Gairik possesses Styptic action and thus helps in condition of perimenopausal menorrhagia.

## **CONCLUSION**

KMR is a potent herbo-mineral formulation balancing aggravated Pitta in the body. Most of the drugs are pittashamaka and calcium compounds balancing the Perimenopausal, menopausal and postmenopausal symptoms. Hence a simple yet effective formulation can reduce the stressful events of Menopausal Syndrome.

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# **ACOMPREHENSIVEUNDERSTANDINGOF RASAUSHADHISINAGEING WITH SPECIAL REFERENCE TO RASAYANAS-AREVIEW**

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## **ABSTRACT:**

The word Vaya means gataui.e, anything that has gati. Vaya here, is taken as natural stages of life- transition from bala to jeernavastha. As atma is ageless, aging occurs in sthula sharira upto the beeja bhaga, and sukshma sharira till the manas. In case of progressive asamyoga of the manas with the atma, there is ultimately loss of bodily connections with atma resulting in death. In gerontology, we see tissue damage, cellular dysfunction, cognitive impairment due to derangement in multiple pathways and physiological processes like AMPK signaling, chaperons & mitochondrial activity, oxidative stress, protein & DNA damage. Ayurveda provides deeper understanding about this event to the level of Dhatvagni.

Rasaushadis are best in treating asadhya vyadis as per Sharangadhara. Aging is inevitable and Asadhya. The cure lies in minimizing biochemical activities which trigger ageing. Rasaushadis may act as best Catalysts reaching target sites efficiently through its small size, greater potency, bio- availability & bio-assimilation. Kastaushadis being Sthula, may not wholly enter minute srotas or target sites but may initiate certain cascade of physiological reaction in combination or alone. Rasayanas are the most widely known group of medicines flourishing today. By channelizing the rasadi dhatus, the rasayana- aushadhis will help delay rapid ksheenata and provide bala, ayu, varna, intellect and ultimately increase quality of life. Prevention of ageing in the early & mid-life may be done through interventions which may act at the level of the genome.

## **INTRODUCTION:**

Ayurveda is an eternal science governing the principles of life, enabling us to utilize them to live life to the fullest. Its elucidation extends far beyond the curative facet to include preventions and predictions of diseased states. It explains in depth about the events of life right from garbhavastha up till old age, death and even beyond. It advocates all the measures including pathya, sadvrta, aushadha & panchakarma for maintaining dhatu & dosha samya. In the current scenario,

we seldom experience perfect health due to the prevalence of endogenous and exogenous factors which alter the physiology of the

body. This has resulted in premature onset of diseases and reducing the quality of life in all age groups. The concept of healthy aging is almost lost in this fast moving world. Aging is inevitable but the time taken to attain the lakshanas of jara differs from person to person depending on their lifestyle. Aging is a multi-systemic and complex process characterized by accelerated cell death. The key lies in slowing down the rate of cellular degeneration by employing effective strategies like Rasayanas through Rasaushadhis which are extensively explained in Ayurvedic treatises.

### **Geriatrics:**

Geriatrics is the systematic study of aging and the morbidities associated with old age. As mentioned above, it is characterized by an accelerated rate of cellular degeneration due to a number of endogenous and exogenous factors. Genome plays a major role in the process of aging and are the prime endogenous factor. Various triggers which may damage the DNA throughout life cause mutations or damage to the DNA, altering the genome, which in turn results in erroneous protein synthesis, autoimmunity and other complications. Exogenous causes include exposure to UV light, environmental stressors, improper diet & exercise. Defective proteins hinder cellular signaling causing derangement in communication. The build-up of reactive oxygen species occurs due to defective radical scavenging activity which in turn damages the proteins causing increased cross reactivity and accumulation of non-native proteins in the body (as seen in Alzheimer's disease, Parkinson's disease, etc.). Mitochondrial dysfunction leads to defective cellular metabolism, hastening apoptosis.

In Ayurveda, jara is said to be a swabhavika vyadhi with loss of bala, varna, dhatu, medha, ojas and indriya patutva, making it a challenging disease to tackle. This is a vata predominant condition and any prolonged vata kara nidana in early life leads to early onset of jara, reducing the quality of life in old age. Acharya Charaka has mentioned the prakrta vaya for jara as 60 years and Acharya Sushruta has mentioned it as 70 years. But in the current scenario, people are experiencing symptoms of jara and co-morbidities like hypertension, heart ailments, osteoporosis, Alzheimer's, Dementia, etc. even in mid-life. What to say of the people already in their vriddhavaस्था.

### **Rasaushadhis:**

Rasaushadhis are therapeutic agents in Ayurveda which includes rasadi minerals & metals like parada, gandhaka, abhraka, swarna, etc. Rasa which are subjected to a number of processing methods to enhance their therapeutic potential and make them compatible to the architecture of the human body.<sup>(1)</sup>

## **MATERIALS AND METHODS:**

Scientific journals and Samhitas were meticulously reviewed to comprehend the probable pharmacological action of rasaushadhis with a biochemical & Network biology approach.

## **RASAUSHADHI IN GERIATRICS**

In the present era we find a huge lobby of supplementations to combat the deficiency or meet the need of the elderly. But whether these supplementations are serving the purpose is a big question mark. Rasashastra has detailed documentations regarding processing methods of various metals and minerals to reduce their toxicity, enhance the bioavailability and efficacy and thus prove to be a better treatment option. Through Rasaushadhis, it is possible to provide medicinal and dietary supplementations in the form of rasayan to the elderly.

The recommended dietary allowance (RDA) of 1989 puts forward the estimated safe and adequate daily dietary intake (ESADDI) for the elderly group of people. (2) The major and trace elements in rasaushadhis used both individually or in combination in doses prescribed by the Acharyas, specific to pathological conditions, considering the rogi pareekshya bhavas will possibly render accurate results.

## **PROBABLE MODE OF ACTION:**

Rasaushadhis individually or in combination possess antioxidant properties which is further enhanced by the samskaras with herbal drugs they are subjected to. Rasa dravyas provide quick, competent results even when used in minute quantities. They are subjected to high temperatures during processing which reduces their particle size and enhances their structural integrity, making them more stable at environmental conditions. Bhasma pariksha like rekha purnata and varitaratva indicate the nano scale particle size which makes them sukshma and vyavayi in the body, allowing them to reach the target site even through the most minute channels. These samskaras reduce their adverse effect by converting them to organic forms which are easily absorbed by the body or maybe even make the body more responsive to their stimuli.<sup>(3)</sup>

The action of rasaushadhis need not be completely dependent on their absorption into the body. They may in fact trigger a cascade of chemical reactions from the intestinal mucosa due to their specific nervous stimulation. When they get absorbed, they serve as substrates in correcting metabolic pathways or as catalysts in accelerating or decelerating a physiological reaction. They may also act as synergists, antagonists or bio enhancers depending on the condition and substance they are used with. The antioxidant effect is



witnessed

by their free radicals scavenging activity helping in restoring cellular homeostasis and delaying cell death.

The word Rasayana means to channelize the rasadi dhatus in their respective srotas and aid proper nourishment to all the dhatus and the parama sara- ojas. In turn, it helps in the overall growth of the body, maintenance of homeostasis, improving strength, intellect, complexion, sensory perception and motor reflexes. Rasayanas are ideal medicines to treat jara due to their quality of pacifying vata and improving the ksheenadhatu. Rasaushadhis used as rasayana have superior medicinal qualities helping tackle even the most complicated pathologies.

### **RASADRAVYASHAVINGRASAYANA KARMA:**

Rasadravya	Research proven pharmacological activities
Parada	<ul style="list-style-type: none"><li>• Kajjali acts as a gastrointestinal stimulant and catalyst in the intestinal mucosa enhancing the absorption of other</li><li>• pharmacological substances<sup>(4)</sup></li></ul>
Abhraka	<ul style="list-style-type: none"><li>• Abhraka bhasma modulates the activity of superoxide dismutase and catalase enzymes and reduce glutathione content<sup>(5)</sup></li><li>• Shataputi abhraka bhasma stimulates leucocytes in a concentration dependent manner acting as an immunomodulator<sup>(6)</sup></li><li>• It is observed to possess hematinic action<sup>(7)</sup></li><li>• It corrects heat induced oligospermia and azoospermia<sup>(8)</sup></li><li>• It has also proven to be an effective anti-hyperglycemic agent<sup>(9)</sup></li></ul>
Vaikranta	<ul style="list-style-type: none"><li>• Elemental analysis of vaikranta bhasma had a positive effect on seminal vesicles<sup>(10)</sup></li><li>• Trace quantities of Aluminum in vaikranta bhasma increased the testicular iron content which had a positive effect on spermatogenesis.<sup>(11)</sup></li><li>• Calcium in trace quantities had a positive effect on sperm motility, metabolism, acrosome reaction and fertilization<sup>(12)</sup></li><li>• Silicon trace element increases calcium absorption and assimilation and reduces the absorption of aluminum if any and protects against neurotoxic effect of aluminum<sup>(13)</sup></li><li>• Boron trace element increases the absorption and retention</li></ul>

	<p>of calcium, magnesium, potassium thus helping preventmembranedamageandretainstructuralintegrity.<sup>(14)</sup></p> <ul style="list-style-type: none"> <li>• Boron affectstheefficacyofhormoneslikethethyroid,insulin,etc.<sup>(15)</sup></li> <li>• Boronincreasestestosteroneandestrogenconcentration,spermcells and spermmotility.</li> </ul>
Shilajatu	<ul style="list-style-type: none"> <li>• Immunomodulatory effect by regulating macrophage andlymphocyteactivity.<sup>(16)</sup></li> </ul>
Makshika	<ul style="list-style-type: none"> <li>• Zincactsasaninsulinomimeticsubstanceandpreventsoxidativedamage<sup>(17)</sup></li> <li>• Vanadium increases glucose uptake and metabolism of lipidsandamino acids.<sup>(18)</sup></li> <li>• Vanadiumincreasesthyroidfunctionandinsulinsensitivity.<sup>(19)</sup></li> <li>• Swarna makshika bhasma reversed lipid peroxidation andincreasedglutathioneandcatalaseconcentrationand activity.<sup>(20)</sup></li> </ul>

Apart from the above rasa dravyas, formulations classified based on their processingmethodsarealsoconsideredasrasayanas:

1. KhalviRasayana-Kajjali,arogyavardhinirasa
2. ParpatiRasayana-SwarnaParpati,RasaParpati,Panchamrithaparpati
3. KupipakwaRasayana - Rasasindhura,SameerapannagaRasa
4. PottaliRasayana-  
HemagarbhaPottali,tamragarbhapottali,RasagarbhaPottaliSomeotherformulationscontainingrasadravyas:

DhatriRasayan	withswarnaandrajatha	deepanabalakara,vatahara
Gandhakararasayana	shuddhagandhaka, loha bhasma	dirghayukara, balakara, divyadehkara
Chaturjatarasayana	abhrabhasma	vaksiddhikaram, Vruddhitvamharate,balam chakurute
Maatalarasayana	mukta,paravalabhasma swarnamakshika	swasa kasahara, kshataagnimandhya hara

**DISCUSSION:**

Ayurveda has ever focused on both prevention and cure of ailments on a holistic level. It always advocated that every effect had a definitive cause underlying it, which

needs to be first eliminated for complete cure. Jara, also being one of the swabhavikavyadhis, also has nidanas with respect to an individual's lifestyle which affects the process by which jara sets in. When jara occurs at the natural age, without complications or co-morbidities, it is considered as healthy aging. But in the present age, we hardly witness healthy ageing as a consequence of various endogenous and exogenous causes. As a yurvedic fraternity it is important to step in at this juncture to provide the world with effective treatment methods to promote healthy aging. Rasayana chikitsa in association with rasaushadhis which both possess potent anti-aging activities and also curative activities as mentioned in the treatises as balya, brimhana, vatahara, indriya dardhyakara, kshayahara, etc., are observed to bring about potent multifaceted pharmacotherapeutic activities by repairing the damaged DNA, proteins, protect against free radical damage, reduce accumulation of non native proteins and minimize cell death and damage, ultimately bringing about cellular homeostasis.

Rasadravyas possess sookshma and vyavayi properties allowing them to move through minute channels at ease reaching the target site rapidly even at small concentrations. They are also capable of carrying other therapeutic agents along with them enhancing therapeutic utility. Another advantage of rasa dravyas is that they are versatile and can be used in any disease of our interest by choosing the processing drug accordingly.

Rasadravyas have taken a back seat in the world of medicine due to speculations about heavy metal toxicity. These claims may hold true in case of poor processing techniques, they cannot be applied in cases where classical samskara methods have been meticulously employed. The quantity and duration of these medicines when used as per the method prescribed in the samhitas is sure not to cause toxicity as proven by many research works already.

Although we have gotten this far in predicting models regarding their pharmacological activity, little is known about the rasayana effect of rasaushadhis in toto. Aging being a complex multi-systemic process, it is hard to ascertain the mode of action of anti-aging drugs by simple methods of research. Compound rasa formulations having rasayana effect like Hemagarbha pottali, makaradhwaja, swarnavanga, etc. have therapeutic actions of not just their principle drugs but also actions in addition to them, due to samyoga and pakasamskara. We need an interdisciplinary approach to uncover the wonders of such rasa kalpanas using Network Biology, biochemistry, physiology, molecular biology, cellular biology and others.

## **CONCLUSION:**

Rasaushadhis have already proven their therapeutic potential in pathological conditions associated with young and middle-age groups. They must be further explored in a

curative perspective to prove their efficacies in emerging geriatric diseases like Alzheimer's, dementia, osteoarthritis, senile cataract etc. Revolutionizing jara chikitsa through Ayurveda rasaushadhis and rasayanas is the need of the hour, not just to protect the aging population but also to educate the young population about healthy aging and techniques used to achieve them. Educating the public about the importance of lifestyle, diet, exercise, mental status in aging should be the first step in preventing co-morbidities of aging and promoting healthy aging.

On point diagnosis and appropriate selection of rasaushadhis should be encouraged among the ayurvedic fraternity with scientific backing and in depth knowledge of treatises.

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# **ABRAKABHASMAASRASAYANAINGERIATRICCAREANDCURE-AREVIEWINPRESENTSCENARIO**

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## **ABSTRACT**

As people get older, they experience changes in their Dosha, Dhatu, Mala, Agni, Oja, and other body systems, as well as mental and cognitive functions. In the current scenario, the COVID-19 pandemic had the greatest health impact on the older population. Because of factors such as reduced immunity and pre-existing co-morbidities such as hypertension, cardiovascular disease, and diabetes, the elderly population is prone to severe infections and has a high mortality rate. It is currently considered vital to design newer geriatric healthcare strategies.

Ayurveda offers a wide range of preventive strategies to slow down the ageing process. The Rasayana works not only by ceasing the aging process but also by enhancing the body's power to prevent disease manifestation. Abhaka bhasma, a unique mineral formulation, is a potent Rasayana. Dravya has the capacity to balance the Tridoshas, cure and manage a variety of geriatric ailments including post-COVID complications. Hence the use of Abhaka bhasma as Rasayana in geriatric disorders along with post-COVID symptoms and complications is the need of the hour.

## **INTRODUCTION**

Aging is both a complex and difficult scientific problem and a universal source of concern. Aging is characterised as a cumulative breakdown of the body's haemostatic adaptive response in modern science. It is also defined as the inherent, irreversible, and age-related loss of viability that makes us more vulnerable to a variety of diseases and death, as well as a steady functional decline of physiological function as well. [1] If

the functional capacity at the age of 30 is taken as 100% then there is a measurable decline at 60 years: 15% decline in Nerve conduction velocity, 20% decrease in resting

metabolic rate, 40% decline in Glomerular rate and 50% reduction in Vital capacity of lungs.<sup>[2]</sup>

Jara or vardhiikya is regarded by Ayurveda as a natural and unavoidable process and is considered as Swabhdvaja. This phrase appears practically in all philosophical, mythological, and artistic treatises in the historical period. A synonym of Jara "Vis rasa" is derived from the word "Samsuadahpatane" which means degradation/retardation in the physical, physiological and psychological well-being. Charaka describes that there is a causative factor for the manifestation of ageing but there is no cause for the cessation of this manifestation, since death following birth is a state of natural flow.<sup>[3]</sup>

The word Rasayana should not be mistaken as a therapy exclusively related to old age. It can be applied from paediatrics to geriatrics. Susruta defines Rasayana as a measure, which prolongs and provides positive health, improves mental faculties and provides resistance and immunity against diseases. Charaka states that, the means of obtaining optimum nourishment to the Dhatus are called Rasayana. It is a kind of Ayurvedic clinical medicine which emphasizes on avoiding the consequences of ageing.

The importance of this article in the current scenario is the COVID-19 pandemic which had the greatest health impact on the older population. Because of factors such as reduced immunity and pre-existing co-morbidities such as hypertension, cardiovascular disease, and diabetes, the elderly population is prone to severe infections and has a high mortality rate. Due to long term effect of corona virus, old age patients can develop post-covid complications. So, after appropriate treatment, a suitable rasayana therapy is very crucial in these geriatric covid patients in order to prevent long covid or post covid complications. So research works carried out on Abhraka Bhasma and Formulations containing Abhraka bhasma from various Scholarly Articles is reviewed in detail and its general properties and characters are overviewed to select it as a rasayana drug in geriatrics and elderly post covid complications.

## **ABRAKABHASMA**

Abhraka is a powerful mineral compound which comprises of minerals such as silicon, iron, calcium, magnesium, and potassium. It also contains aluminium, sodium, titanium, chlorine and phosphorus in traces. In accordance to modern scientific studies, abhraka can be classified into two types, mainly Alkaline Mica and Ferromagnesium Mica. But, according to Ayurveda, Abhraka is classified into four types, which are Pinak, Naag, Manduk, and Vajra. Again, it can also be categorized according to the available colours into four types, i.e. Yellow, White, Red and Black. Bhasma, is an Ayurvedic metallic/mineral preparation, treated with herbal juices or decoction and

exposed for certain quantum of heat. Typically, any bhasma is prepared through Shodhana, Bhavana and Marana processes. These different levels of treatment ensure that bhasmas are free

from toxicity at therapeutic doses. <sup>[4]</sup> The particle size of Abhraka bhasma has been reported to be around 29 and 88 nanometres. <sup>[5]</sup> The number of puta performed influence the performance and quality of abhraka bhasma. The sahastraputi abhraka bhasma, which is subjected to 1000 puta, is thought to be of the highest grade. Abhraka bhasma comes in a variety of grades that are used to cure a variety of diseases and as a component in various rejuvenating formulas.

## ABHRAKA BHASMA

### GUNA 1. RASARATNASAMUCH

#### AYAM

गौयीते ज्ञेयभृत्तु तं वातनत्तमघ्नं । एषां धौधप्रशभतरुजं वषमभामषु मभगरमभं ।  
फलं सन्गंधं रुचदभकपदीननं शीतवीमयतत्तद्मोग् । सकरगदहुद्मोभसुते रं  
रफल्ध"

R.R.S2/2[6]

#### 2. RASATARANGINI

अभं सन्गंधं नयभशयं स्वादुचामुष्मभप्रचक्रेयं मं वणमयरुचकयभरं दीननं चानतफलं  
मभने मं भेधां जनमततयां स्तद्मसं वर्दयनञ्चेत्स्त्रे स्थणमय

वतयनतनयं दीननं नुषकेतो"

प्रं

घोयां दरमतभहायोगसंघातबीनतयस्वाद्तेप्परीनतं ज ासेचम ् । देहेशत्तं  
नमतनयं नभह

वतयनततयां फह्वनत्मप्रदात्रीकामारस्मंहयनतसुतयाभभ्रकं सेव्मभानभ" R.T-10/82-  
83[7]

## GERIATRICSYNDROMES

Geriatricsyndromereferstoasymptompresentationthat iscommon inolderadultswhich are multifactorial in origin. Common Geriatric problems include Dementia andDelirium, Fall, Urinary Incontinence, decreased sleep and constipation. Dementia is asyndrome of progressive decline in which multiple intellectual abilities deteriorate,causingbothcognitive andfunctionalimpairment.itisastateofchronicconfusion. Delirium is an acute state of confusion. Both dementia and delirium are characterized byDisorientation, Memory impairment, Paranoia, Hallucinations, Emotional lability, Sleep-wake cycle reversal. Falls in old age is that which excludes falls occurring from

seizure, stroke, and syncope. Rate and risk of injury from falls increase with age. Most falls are multifactorial. It is sometimes a symptom of another disease such as: Infections, Neurologic disorder, and Medication side effect or Age-related physiologic changes. Risk factors for falls include Muscle weakness, Gait or balance abnormality, Use of a walking aid, Visual impairment, Arthritis. Urinary Incontinence is a major problem for older adults. Up to age 80 years, it affects women twice as commonly as men. After age 80, both sexes are equally affected. Risk factors include advanced age, functional impairment, dementia, obesity, smoking, affective disorder and constipation.

## **CURRENT SCENARIO -LONG COVID/ POST COVID COMPLICATION**

As per WHO generally people will take an incubation period of 10 to 14 days to recover fully, and sometimes more. Mild to moderate case of COVID-19 recover in about 14 days. Sometimes COVID-19 symptoms can remain for more than 20 days up to 45 days. Due to long term effect of coronavirus, patients can develop post-COVID complications. Coronavirus can damage the lungs, brain, blood vessels, skin, nerves, kidney and heart, which increases the risk of long term health issues. However, the virus may remain in the body up to 3 months after diagnosis. This may mean some people get a second positive test result even after they recover, although this does not necessarily indicate the virus is still transmissible. . People who continue to experience mild symptoms post recovery called as Post Covid Syndrome or Long Covid, these people may experience post COVID conditions and also develop long-term complications that affect the organs. Post COVID complications are a broad range of new, ongoing or returning health conditions, people can experience more than 28 days/4 weeks after first being infected with the coronavirus. Elderly group people and people having serious medical conditions such as diabetes, immunodeficiency disorders, cancers or chronic diseases are at the risk of developing post COVID complications.

As per recent reports, possible long covid causes identified in patients recovered from COVID-19 may include:

- Reduced or lack of response from the immune system,
- Reinfection of the virus,
- Multisystem inflammatory syndrome (MIS),
- Prolonged hospitalization due to severity,
- Post-traumatic stress

Common signs and symptoms of post covid complications observed after recovery that include:

- Fatigue, Feeling of tiredness, feverish feeling
- Shortness of breath or difficulty breathing
- Cough or Chest pain
- New onset diabetes
- Myalgia (muscle pain) for long period

- Inability to focus or difficulty thinking or a lack of mental clarity (brain fog)
- Rapid or fast heart beat (heart palpitations),
- Insomnia, anxiety disorder or depression

## **EFFECT OF POST COVID COMPLICATION ON TRIMARMA**

Heart-Heart-patients post COVID-19 recovery have shown irreversible death of the heart muscle, even in people who experienced only mild COVID-19 symptoms. This may increase the risk of Myocardial infarction.

Brain-there are many reports where young people with COVID-19 also experienced neurological symptoms including muscle weakness, tingling or numbness in the hands and feet, and can eventually cause paralysis (Guillain Barré syndrome), dizziness, sudden blackout, confusion, delirium, seizures, stroke. COVID-19 may also increase the risk of developing Alzheimer's disease and Parkinson's disease.

Kidney-patients affected with COVID-19 can develop sudden loss of kidney function, known as acute kidney injury. Dialysis may be necessary in severe cases, but this type of kidney damage can sometimes be reversed. People with CKD are at higher risk of developing severe symptoms post COVID-19 recovery. So it's important to take all the necessary precautions to prevent infection.

## **STUDIES ON ABHRAKABHASMA**

1. Gigi Mathew- Evaluation of Haematinic effect of Guda Marita Abhraka bhasma- An Experimental Study [8]
2. Anti-helminthic effect of Abhraka Bhasma prepared with Kumaiswarasa experimental study. [9]
4. In vivo hypoglycaemic activity of Abhraka bhasma by alloxan induced method. [10]
5. Evidence for safety of Ayurvedic herbal, herbo-metallic and Bhasma preparations on neurobehavioral activity and oxidative stress in rats. [11]
6. The effect of Abhraka bhasma on in vivo CCL4 induced hepatotoxicity and nephrotoxicity. [12]
7. Testicular oxidative stress protective effect and Abhraka bhasma showed a defensive effect in heat-induced oxidative stress in rat testicular cells. [13]



8. Effect of Abhrakabhasma (4 mg in formulation) for oral treatment of Acne vulgaris. [14]
9. Effect of Abhrakabhasma in lipid profile in rats and found anti hyperlipidaemia. [15]
12. Abhraka bhasma Induces the secretion of insulin from pancreas, hence used in the treatment of Type I Diabetes mellitus. [16]
13. Tamhankar Yogesh et al –  
In vitro Immunomodulatory Activity of Shataputi Abhrak Bhasma in Nitro Blue Tetrazolium Test [17]

## **RESULT**

### **1. Abhrakabhasma –asarasayana**

In RASA

RATNASAMUCHAYA [18] Acharya has explained the properties of abhrakabhasma in the initial phase of the chapter.

- Initially, Acharya described abhraka as GOURITHEJAPARAMAAMRITAM, implying its importance as a rasayana dravya. It alludes to a patient's accomplishment of dhatusarata and ojus in the body.
- **PRANJA BHODI**- is that which brings awareness to the body. It might happen at the cellular or tissue level. The body's pranja is disrupted as a result of pathogenesis in several disorders. Abhraka can be called pranja bhodi, that which aids the body in regaining its physiological attitude. By this guna of pranja bhodi, abhrakabhasma works well as a rasayana in geriatric dementia and delirium.
- **PRASAMITHAM RUJAM** - The word 'rujam' can be interpreted as vyadhi, abhrakabhasma can be characterized as something which relieves vyadhi, pain, and discomfort in geriatric patients.
- **VRISYAM AYUSYAM AGRYAM**- vrisyam demonstrates its aphrodisiac properties, indicating that the individual attains proper development of all dhatus. Ayusyam the word means "longevity of life." This is a vital feature for a rasayana dravya to have. As a result, Acharya regarded abhraka bhasma as the most important medication for attaining longevity.
- **BALYAM**- is a term which means "to gain strength in oneself." Here, the patient gains strength in body, mind, and ojus. It refers to a person's attainment of samyakpusti, and dhatusarata.

- Maintaining the equilibrium of tridosh in the body, which is highly important in a rasayana dravya, is what VATA PITTA KAPHA and AKASH denotes. This will aid in the optimal health of the elderly and as a treatment for jarajanya vyadhi.
- **SNIGDHAM**- Patients who are on medicine for dyslipidaemia or hypercholesterolemia are hesitant to take any ahara or aushada dravya which is a snigdha like gritha yoga. Snigdha guna is highly important for good brain functioning or to protect the brain from age-related atrophic changes, maintenance of sapta dhatu and to achieve this snigdha guna without aggravating kapha pradhana vyadhi, can be only attained by abhraka so as a rasayana dravya it is very essential.
- **RUCHITAM** aids in the attainment of indriya prasada and the cure of anorexia in patients. Jadaragni, Dhatuagni, and Boothagni can be maintained by DEEPA NA quality. It activates all three agni and helps a person's metabolism flow efficiently. Aruchi and ajeerna are two major complaints dealt by geriatric groups can be managed easily.

## 2. Use of Abhraka bhasma in post-covid complications

- When looking at the causes of post-covid complication, the anthelmintic property of abhraka bhasma can be used to treat virus reinfection and its retention in the body of the patient for up to 3 months.
- Abhraka bhasma's antioxidant and immunomodulatory characteristics can aid in recovery and rebuild immune system response that has been weakened by long-term viral infection and prolonged anti-biotic and steroid medication during the course of treatment.
- The majority of post-covid symptoms can be easily managed by the therapeutic efficacy of Abhraka bhasma with appropriate anupana.
- New onset diabetes is a problem that is commonly encountered in post-covid instances, it can be treated with abhraka bhasma as the pranajabdhana of the cells can be regained for the proper production of insulin with suitable bhavana dravyas. Likewise other symptoms like cough, shortness of breath, brain fogging can be managed accordingly with suitable anupana which is selected from the therapeutic point of view.

## **CONCLUSION**

In the present scenario, older patients approach with a history of COVID infection which was mild, moderate, or severe that was adequately handled in modern medicine and seek support for post-COVID care or treatment for post-COVID sequelae from Ayurveda. Conditions associated with long COVID-19 infection may be the result of injury to multiple organs, including the lungs, brain, blood vessels, skin, nerves, kidney and heart. This can be seen as metabolic, musculoskeletal, cardiovascular, and neurological complications secondary to the disease.

On reviewing the above studies and articles about Abhraka bhasma, we can effectively conclude that as a wonderful rasayana dravya with a wide range of therapeutic characteristics, Abhraka bhasma plays an important role in this context. As a result, drug selections should be done carefully to ensure that the rasayana and vyadhihara properties are preserved. As we constantly consider, medication should protect Swastha's health while curing Athura's ailment.

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# **EFFECT OF KRISHNA MUSALI (CURCULIGO ORCHIOIDESGEARTN)MUKHALEPAINVYANGAW.S.R. TOMELASMA-ACLINICALSTUDY**

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## **ABSTRACT**

Vyanga is one of the Twak Vikara, which affects the psychology of the patients in greater extent, although it is kshudraroga. It accounts for great deal of anxiety and stress which is caused mainly due to stress, sun exposure. Treatment modalities for Vyanga are usually unsatisfactory, due to its sudden exacerbation and remission. With this background the study was undertaken to study the effect of Krishna Musali Mukhalepa in Vyanga. Clinical study on Vyanga, It is a single blind clinical study consisting of 30 patients of inclusive criteria. Simple randomized sampling was carried out for this study. Krishna Musali Mukhalepa with Ghrita and Madhu, was given for external application over affected area over face, in a sufficient quantity, once daily for 30-45 minutes, up to 21 days. The parameters of study like colour of patches, number of patches, size of patches, itching and burning sensation were recorded before and after treatment. The data was analyzed by paired t test, i.e. student t test. There was statistically highly significant in objective parameters, but in overall assessment 93.3% patients got improvement. Clinically there was improvement in colour of patches compared to other parameters. Krishna Musali Mukhalepa is very effective in the management of Vyanga.

**Key Words:** Krishna Musali, Vyanga, Melasma, Mukha Lepa

## **INTRODUCTION**

According to Ayurveda skin is made up of seven layers they can be affected by various disorders. Vyanga has been explained in Kshudraroga context in Ayurveda literature, which affects the second layer of skin.

Vyanga can be correlated to Melasma, which is the most common skin

manifestation in India especially during the age of 15 to 45 years. Incidence rate is about 0.025 to 6% of population. About 10-30% patients will come with skin complaint in India. Stress &

hormonal changes may cause melasma, like in pregnancy, ovarian disorders; even by using drug such as hydroquinone can cause melasma in both men and women<sup>3</sup>. The lesions are pale or dark brown patches of pigmentation with irregular borders, common sites are nose, cheeks, upper lips & forehead<sup>4</sup>.

In Vyanga, there is vitiation of Vata, Pitta<sup>5</sup> and Rakta. As the drug Krishna Musali (*Curculigo orchioides*) is Vata, Pittahara having Guru, Snigdha, Picchila Gunas and Madhur, Tikta Rasas, Madhur Vipak, Ushna Virya & which does Brumhana, Rasayanakarmas, Sthairya & Mardhavakar and also both Ghrita and Madhu are Varnya and Vata-Pittahara.<sup>6,7,8</sup>

Lepa<sup>9</sup> is the one of the treatment modality for Vyanga in Samhitas and which is more effective, as it acts locally & removes Doshas. Lepa is affordable to all classes of society & which is readily available to all, so Lepa has been selected as treatment modality in the management of Vyanga.

Thus, present study was intended to know the effect of the Krishna Musali Mukha Lepa with Ghrita and Madhu in Vyanga, as these are explained as capable of destroying hyper-pigmentation found on face.

### **OBJECTIVE:**

To study the effect of Krishna Musali (*Curculigo orchioides* Gaertn) Mukha Lepa in Vyanga w.s.r. Melasma.

### **Review on Krishna Musali**

- Botanical Name - *Curculigo Orchioides* Gaertn
- Family - Hypoxidaceae
- Rasa - Madhura, Tikta.
- Guna - Picchila, Guru, snigdha,
- Veerya - Ushna/Sheeta
- Vipak - Madhura
- Karma - Rasayana, Brumhana, Balya, Vrushya.
- Chemical constituents - Flavones, Tannins, Alkaloids, Glycosides, Stigmasterol, Fat, starch

### **MATERIALS AND METHODS**

#### **Source of Data-**

Patients presenting with the features of Vyanga, were selected for the clinical study from OPD and IPD of Shri Veer Pulikeshi Rural Ayurvedic Medical College, Badami, irrespective of gender, occupation,

## **Study Design:**

- It is a single-blind clinical study consisting of 30 patients
- Simple randomized sampling was carried out for this study.

## **A) Inclusive Criteria:**

- Patients who have dark brown pigmented patches over face
- Age-20 years to 45 years
- Chronicity of illness – 1 to 5 years.
- Irrespective of number of patches over face.

## **B) Exclusive Criteria:**

- Suffering from any systemic and dreadful diseases.
- Patients with Post-inflammatory pigmentation and oozing.

## **C) Diagnostic Criteria**

- Shyaava (Dark brown)
- Tanu (Thin /less quantity)
- Mandala (Circular patches)
- Neeruja (painless)

## **INTERVENTION**

1. Initially the patient was advised to clean the face with lukewarm water.
2. Lepa was prepared with Krishna Musali choorna with honey and ghee was given for application on the affected areas.
3. It was advised that Quantity and thickness of Lepa was sufficient enough to cover the lesion completely
4. Duration of Each Application - Until the Lepa gets dried and once it dries the patient was asked to wash the face with warm water.
5. Intervention period - For 21 days once daily
6. Post treatment assessment - After 21 days



## CRITERIA FOR ASSESSMENT

The improvement provided by the  
of following parameters:

therapy was assessed on the basis

### 1. Colour of Patches

Normal Skin Colour - Grade  
0 Light brown patches - Grade  
1 Dark brown Patches – Grade  
2 Bluish black colour – Grade 3

### 2. Number of Patches

No lesions Grade-0  
1-2 Grade 1  
2-4 Grade 2  
4-6 Grade 3  
>6 Grade 4

### 3. Size of Patches

0-2cm Grade 1  
2-4cm Grade 2  
4-6cm Grade 3  
>6cm Grade

### 4 Other Associated symptom

#### s1. Itching

No Itching Grade 0  
Mild Itching Grade  
1 Moderate Itching  
Grade 2 Severe  
Itching Grade 3

## 2. Burning

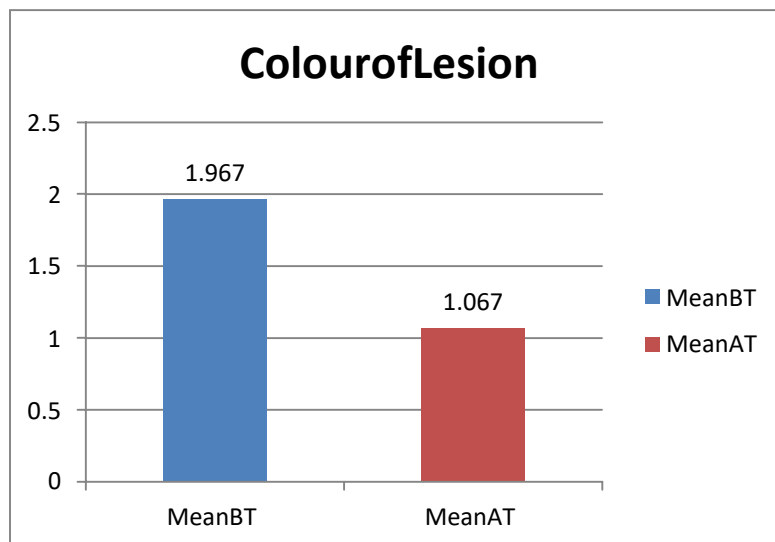
NoBurningsensation	Grade0
MildBurningsensation	Grade
1Moderate Burning sensation	Grade
2SevereBurningsensation	Grade3

### Statisticalanalysis:

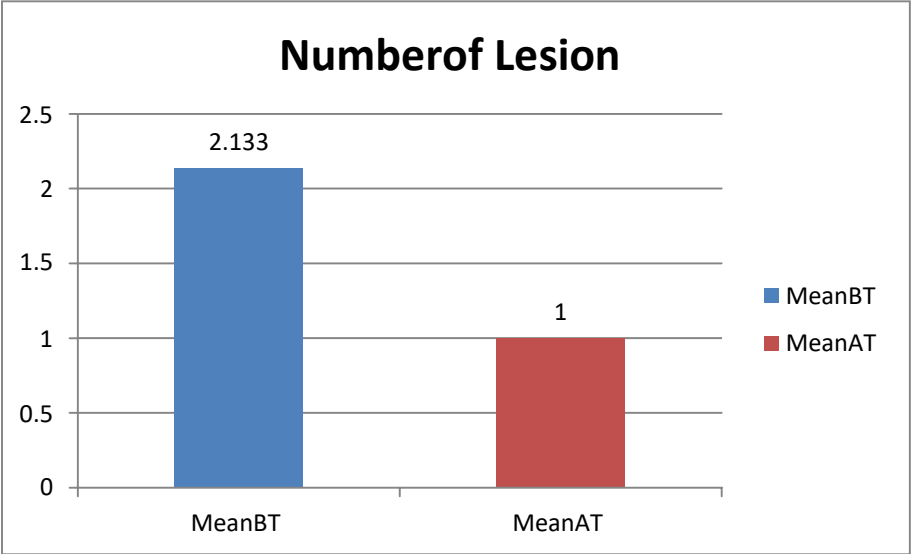
The results have been analyzed statistically using student t test, i.e. paired t test.

Parameters	Mean BT	Mean AT	S.D	S.E	T Value	P value	Relief%
Colour of Lesion	1.967	1.067	1.067	0.9509	10.26	<0.001	45.75%
No of Lesion	2.133	1	2.368	1.196	12.23	<0.001	53.11%
Size of Lesion	1.933	1.167	0.379	0.092	7.389	<0.01	39.62%
Itching over lesion	0.6333	0.06667	0.2537	0.04632	4.958	<0.05	89.47%
Burning Sensation	0.6000	0.1000	0.3051	0.5571	4.785	<0.01	83.33%
Mean of Improvement in Percentage							62.25%

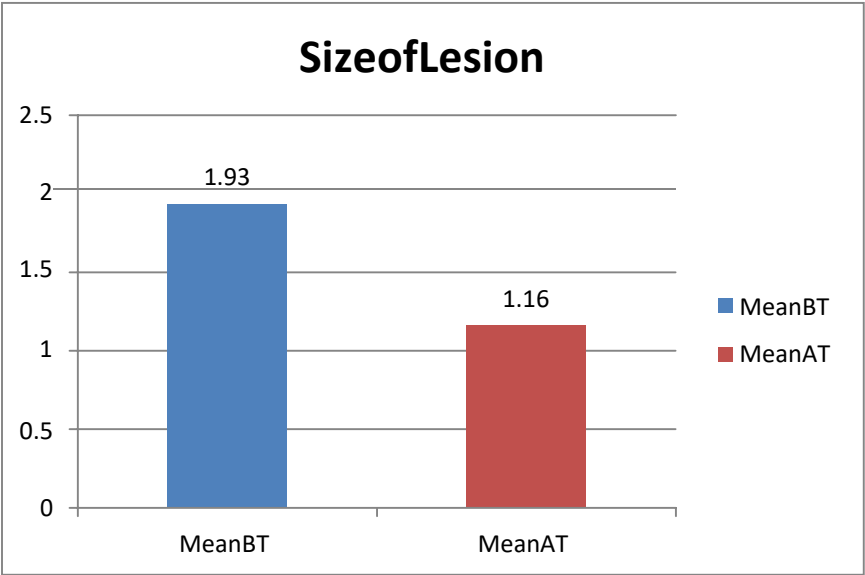
**Figure 1: showing effect of therapy on colour of lesion**



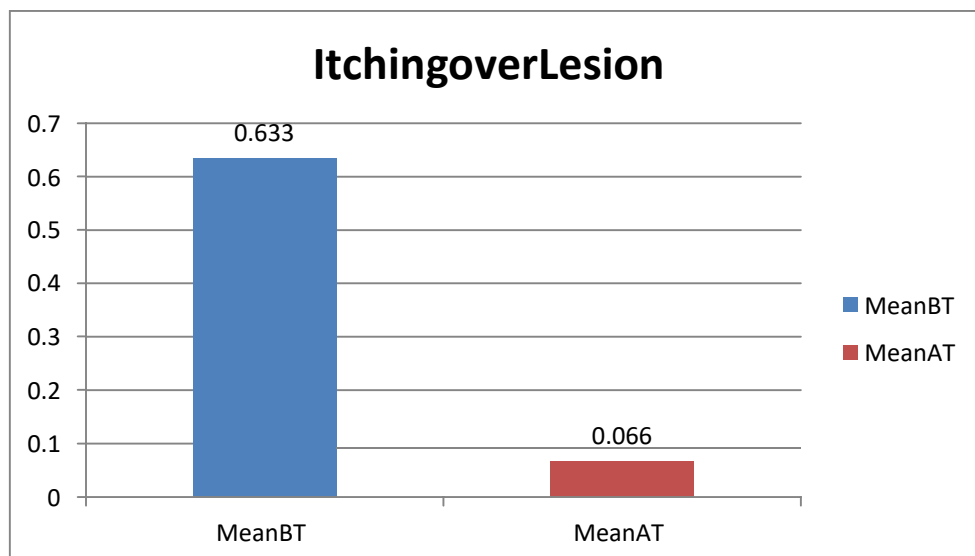
**Figure2:showingeffectoftherapy onNumberofLesions**



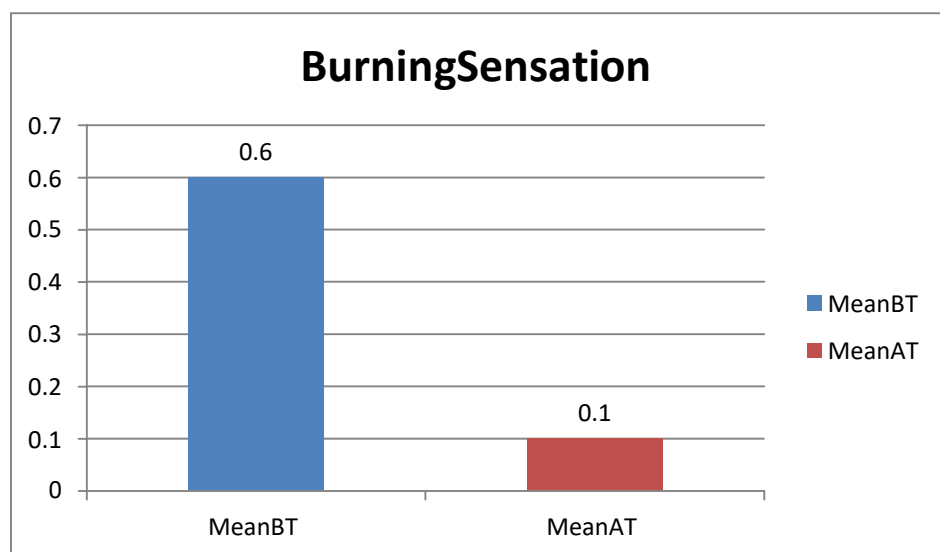
**Figure3:showingeffectoftherapyonSize ofLesion**



**Figure4:showingeffectoftherapy onItchingOverLesion**



**Figure5:showingeffectoftherapy onBurningSensation**



### **OveralleffectofTherapyonVyanga**

Assessment	No.ofpatients	%
Cured	0	0%
Improved	28	93.33%
Unchanged	2	6.67%

Total	30	100%
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## **DISCUSSION**

Vyanga can be correlated to Melasma, which is the most common skin manifestation in India especially during the age of 20 to 45 years. Incidence rate is about 0.025 to 6% of population. Now a day's use of chemicals, polluted environment, stressful life & emotional disturbance definitely plays a major role in manifestation of Melasma.

In our classics it has been mentioned that Manasika Nidana for Vyaṅga is mainly stated to be as Krodha, and Ayasa which in turn vitiate Pitta and Vata respectively. An emotional stress is a prime factor in causation of Vyaṅga. Stress is an influential factor in pigmentary disorders and it can also precipitate the etiologic pathway of a cutaneous manifestation thus it is necessary to treat it and to prevent discoloration and disfiguring of face.

Probable mode of action of drug is based on the Rasa, Guna, veerya and vipaka. The drug Krishna Musali is having Madhura, tikta rasa, does the shamana of prakruti vata and pitta doshas, thus maintains the equilibrium of doshas, mainly pitta dosha which is mainly initiated by Dosh in Vyaṅga.

As it is having sheeta, Picchila, and gurugunas, which brings Mardhava to the skin, pacifies ruksha guna of vata and does pitta shamana by sheeta guna. Madhura vipaka by virtue of its snigdha guna and Kapha kara properties is responsible for Varna Utkarsa, thus the drug is absorbed into circulation by virtue of its Vipaka. As Krishna Musali choorna is mixed with Ghrita (ghee) and Madhu (honey), both of them enhance the varna.

## **CONCLUSION**

Promising clinical efficacy was found from trial drug Krishna Musali in both subjective (Shavatanu varna mandala) and objective (Colour of patches, number of patches, size of patches) parameters without any clinical side effects. Overall 62.25% of mean improvement was observed on all the assessment parameters.

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## REVIEWARTICLE

### ROLE OF RASA DRAVYAS AS RASAYANA IN GERIATRICS

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#### **Abstract:-**

Geriatrics is a major medical speciality dealing with the health and care of old age group. Ageing is a complex and irreversible process which leads to a gradual decrease in physical as well as mental capacity, high risk of different diseases and finally death. Geriatric problems can be categorised as physical, psychological, emotional and social. Ayurveda has potential to prevent or manage old age problems including different diseases conditions like Prameha, Hridroga, Anidra, Sandhivata etc. Rasayana Tantra is one among eight branches of Ayurveda which deals with rejuvenating therapy. It is a unique therapeutic methodology helps to delay the ageing and minimize the degenerative changes occurring in this phase. Rasa dravyas are considered as backbone of Ayurveda due to its Rasayana properties. Each Rasa dravyas are unique due to its faster action and longer shelf life. Which has ability to cure different diseases with minimal dosage (Alpa matra), and which has excellent therapeutic value.

Old age is considered to be a disease as per the ancient seers of Ayurveda which can be prevented by daily usage of drugs which have rejuvenative property. Naimittika Rasayanas are meant for disease specific and taken for long duration. Considering the old age Rasa dravyas can be considered ambrosia for suffering mankind. Here is an attempt is made to discuss rasa dravyas can be used in geriatrics which is mentioned by different classical text books of Rasashastra.

**Keywords-** Ayurveda, Geriatrics, Rasadravyas, Rasayana, Rasashastra

#### **Introduction:**

According to WHO the pace of population ageing is much faster than in the past. By 2030, 1 in 6 people in the world will be aged 60 years over. In 2050, 80 % of old age people will be living in low and middle income countries. Old age population is a powerful and transforming demographic force. Due to this demographic shift most of the countries will face major challenges to ensure their health and well being. Managing elderly people requires special attention through different system of medicines.

Ayurveda , Ancient Indian system of medicine is based on the basic fundamental principles , diagnostics, therapeutics, materia medica which are mostly herbo mineral in origin. Ancient seers had prioritised preventive aspects and promotion of health,

disease prevention and longevity. Health was defined by Acharya Sushruta as a state of physical, mental , social and spiritual well being. Ayurveda deals with homeostasis of Dosha , Dhathu and Malas. Arogya is based on the healthy status of Agni, Srotas and Dhathus. Ayurveda was practised under 8 different super specialisations namely Kaya, Bala, Graha, Urdhwanga, Shalya, Damstra, Jara and Vrushya. The Jara Chikitsa which is also known as Rasayana Tantra is a unique branch of Ayurveda which deals with geriatrics, nutrition and rejuvenation. Jara is considered to be a vyadhi as per Ayurveda Shastra which is preventable through Rasayana Chikitsa.

### **Importance of Rasayanas:**

Rasayana or the science of nutrition deals with geriatric care and rejuvenation. Rasayana doesn't signify either a single Dravya or a compound formulation rather it refers to a course of rejuvenative remedies, drugs, dietetics, healthy lifestyle and good moral conduct. The rasayana dravyas produce best quality dhathus by acting on the biological system by improving the nutritional status leading to better quality of tissues, increases disease resistance, immunity, longevity and improve mental endurance. The Rasayana acts at the level of rasa, agni and srotas. Kamya Rasayanas ( promoters of normal health) are of three types Medhyakamya rasayana, Pranakamya rasayana, Srikamya rasayana. Some Rasayanas are age specific and are particularly prescribed for each age groups. As a person gets older, age related diseases arise. To prevent the problems related to ageing specific rasayanashave been indicated by Acharya Sharangadhara and Vagbhata.

### **Concept of Ageing/Significant changes in Jara:**

Ayurveda classifies three stages of life viz Balya, Youvana (madhyama) and Jara or Vriddhavastha. The Vriddhavastha is considered to be the stage of life where the Dhathus are undergoing a constant destruction by various intrinsic and extrinsic factors. The ageing progresses and leads to significant changes in old age people. The old age diseases which is preventable by having Sughayu and intake of Nithya rasayanas like Ghritha, Ksheera, Shashtika shalianna etc. Acharya Charaka said that A person who indulges in right diet, follows code of conduct , who has compassion, who does charity will never be afflicted with any diseases. Many diseases occur naturally during the process of ageing which can be organ specific or developing diseases like diabetes, hypertension, insomnia, dementia , problem in eye sight, gait problem, cognitive impairment, problems related to bones and joints , sensory deficits, wrinkling of skin etc. thus, diseases can be managed well by the use of Rasadravyas which have Rasayana property.



Acharyas had different opinion regarding old age. According to Acharya susrutha after 70 years considered as old age. but, Acharya charaka mentioned that old age is after the age of 60 years. Acharya Sarangadhara described loss of different biological factors in different age group (table.1) so, one can select specific Rasayanas according to different decades of life.

**Table 1. Loss of different biological factors in different age group**

Sl.no	Age group	Loss of biological factors according to age group
1.	0-10	Loss of childhood
2.	11-20	Loss of growth
3.	21-30	Loss of complexion
4.	31-40	Loss of intellect
5.	41-50	Loss of skin texture
6.	51-60	Loss of vision
7.	61-70	Loss of virility
8.	71-80	Loss of strength
9.	81-90	Loss of cognitive power
10.	91-100	Loss of locomotive power

### **Rasa dravyas as Ambrosia**

Rasa dravyas mentioned in different classical text books of Rasashastra like Rasaratna Samuccaya, Rasatarangini, Ayurveda Prakasa etc. which includes Parada, Maharasas, Uparasas, Sadarana rasas, Lohas, Ratnas, Sudha vargas, Sikata vargas. which after proper shodana (purificatory measures) when administered in prescribed dosage acts like nectar. the uniqueness of rasa dravyas are it can be used in minimal dosage form with maximum therapeutic utility. the rasa dravyas act at the level of srotas and dhatu helps in the transformation of tissue element which are more potent. the Rasa dravyas which have the Rasayanaguna because of their free radical scavenging properties prevents ageing process. Rasa dravyas prevent the oxidative stress which is evident in various animal model experiments. it provides the nutrition to the tissue element thereby improving the microcirculation and helps in tissue perfusion.

## RASADRAVYASINDICATEDINGERIATRICS

### Parada( Mercury)p

Mercury ( Parada) considered as supreme among all rasa dravyas due to its various properties appropriately prepared mercurial medicines will be therapeutically efficient to cure different diseases.

- Ability to balance all three doshas
- Has soothing effect on the body
- Nourishes all the vital parts of the body
- Improves appetite, physical strength, body radiance
- Vrishya (aphrodisiac)
- Balya (tonic)
- Snigdha, Rasayana (rejuvenative)
- Gives a firm physique, a stable mind
- Best destroyer of diseases like Kshaya, Shosha, Atisara etc.

**Table 2. Maharasa useful in different Geriatric conditions**

Maharasa	Karma/Rogaghna	Reference
Abhraka	Vrishya, Ayushya, Prajnabodhi, Prashamitha rucham, Balyam, Kshayghnam, Jaravairupyan asanam	RRS.2/2, RT10/12 <sup>ii</sup>
Vaikrantha	Ayushyam, Balavarnakara, Ativrishya, Ati rasayana, Balalohakari	RRS2/55-56, RT 23/167 <sup>iii</sup>
Makshika	Jaravyadhinasa, Sarvarasayanagreya	RRS2/76-77 RT21/26 <sup>iv</sup>
Vimala	Vrishya, Atirasayana	RRS 2/ 92
Shilajathu	Prameha (naimithika rasayana for prameha), Kshaya, Shula, Jaramrithyugha	RRS 2/108 RT 22/84 <sup>v</sup>
Sasyaka	Rasayana, Hridroga, Shula, Balakritham	RRS2/121 RT21/128 <sup>vi</sup>
Rasaka	Sarvamehaghna, Kshyaghna, Netrya	RRS 2/144

**Table3. Uparasaand SadaranarasausefulindifferentGeriatricconditions**

<b>Uparasa/Sadarana rasa</b>	<b>Karma/Rogaghnata</b>	<b>References</b>
Gandhaka	Atirasayana, Deeptanala ,Kasa, Shwasa	RRS 3/16 RT8/36-37 <sup>vii</sup>
Pushpa kasisa	Kshayaghna	RRS 3/ 51
Harathala	Rasayana, Deepaniya	RRS 3/ 65 RT11/55 <sup>viii</sup>
Manashila	Sarva Rasayanagreya, Kasa, Kshaya, Swasa, Varnya	RRS 3/ 87RT11/116 <sup>i</sup> x
Neelanjana	Netryam, Rasayanam	RRS 3/101
Kapardika	Vrishya, Netrya, Kshayanasini	RRS 3/128
Hingula	Atirasayana ,Sarva rogahara, Vrishya	RRS 3/ 135

**Table4.LohasandRatnasusefulindifferentGeriatric conditions<sup>x, xi</sup>**

<b>Lohas/ Ratnas</b>	<b>Karma/Rogaghnata</b>	<b>References</b>
Swarna	Ayushyam ,Pushtikari, Medhya, Veerya vridhi, Bruhmana, Vrishya, Rasayana, Smruthik ara	RRS 5/ 9- 11RT 15/69
Rajatha	Balyam, Vayaskara, Medhya, Vataharam, Rasayan a, Sarvarogapaha	RRS5/28-29
Tamra	Kshaya, Netrya	RRS 5/47
Kanthaloha	Atirasayanam, Ayupradam, Kshaya	RRS 5/92
Manikya	Vrishya, Kshayaghna ,Medhya, Rasayana, Ayushyam, Vajikarana	RRS 4/ 12RT 23/57
Muktha	Veeryapradam, KanthiagniPushtikara	RRS 4/ 14
Pravala	Kshaya, Kasa	RRS 4/19

Tarkshya	Shwasa,Ojovivardanam	RRS 4/22
Pushparagam	Vataghnam	RRS 4/25
Vajram	Ayushpradam,Vrishyam,Sakalaamayaghnam, Mritunjayam	RRS 4/32
Neelamani	Shwasakasaharam,Vrishyam	RRS 4/50
Gomeda	Kshaya,Twachyam,Buddhi prabodanam	RRS 4/53
Vaiduryam	Prajnaayurbalavardanam	RRS 4/56
Suryakantha	Rasayana,Medhya	RRS 4/73
Rajavartha	Prameha,Kshaya,Vrishya,Rasayana	RRS 4/78

**Table.5.Sudhavargadravyasandsikatavargadravyasusefulingeriatriccare**

<b>Sikata varga / sudhavargadravyas</b>	<b>Karma/Rogaghnatha</b>
Sukthi	Hridamaya,swasa,mutrasarkara,balya,sulahara
Sankha	Balya,varnya
Sambuka	Shulaghna,netramaya,deepana,pachana
Mrigasringa	Hritshula,hikka,swasa
Khatika	Netramaya,shotha
Godanti	Balya,deepana,swasa,kasa
Samudraphena	Chakchushya,deepana
Kukkutandatwak	Strengthensthebones,hridya,vrishya, strengthenstheCNS
Kurmaprstasthi	Strengthensthebones,Ano-rectaldisease
Ajasthi	Strengthensthebones,kshaya
Badarasma	Mutralla,indicatedinmutrakrichra,mutraghata
Kouseyasma	Prameha
Nagapasana/jaharmohara	Strengthenstheheart and CNS,improves liverfunction,physicalstrength,ojas

## **Discussion**

Rasayana is a unique concept of Ayurveda which deals with the ageing process and prevention of different age related problems. the number of elderly persons has increased and will continue to do so. as the number of elderly increases the need to look after them will occupy more and more and the resources of society at large. Rasai is considered to be

Rasayana as per Rasa Vaidyas. Rasa and Rasayana are mutually complimenting and there lies no difference between the both. The word Rasa is also synonymous to Rasayana. Different types of Rasa Rasayanas are found in classical Rasa Shastra texts like Kupipakwasayana, Khalvirasayana, parpati rasayana and potalirasayana etc.

Rasoushadhis are very unique due to its minimal dosage quick action and longer shelf life. Among all the rasadravyas, parada (Mercury) has multiple properties like rasayana, vrishya, balya etc so, it can be a best choice for geriatric care after proper purification. According to classical rasasastra text books like Rasaratna samuchaya and Rasatarangini most of the Maharasa, Uparasa, Sadaranarasa, Loha and Ratnasha Rasayana, Vrishya guna and which is indicated in many disease conditions occurring in old age. rasadravya can be selected according to disease specific conditions. like, in old age vision related problems are very common. so, here we can use rasadravyas like Neelanjana, Rasaka, Kaparda, Tamra, Shambuka etc. in case of heart related problems one can select sudhavargadravyas like Shukthi, Mrigasringa, Kukkutandatawaka etc. Prameha is another common disease seen in old age. Shilajathu is mentioned as Naimithikarasayana for Prameha by different Acharyas. In respiratory ailments Manashila, Gandhaka, Godanti, Shukthi, Pravalata can be the best choice of medicines. Calcium deficiency and related problems like joint pains are very common in old age. here, one can use sudhavargadravyas like Kukkutandatawaka, Ajasthi, Kurmaprasthi. Most of the rasadravyas useful in Kshaya like Abhraka, Shilajathu, Rasaka, Manashila, Tamra, Kanthaloha, Pravala, Gomeda etc. Effects of ageing on various system especially, the Neurological, Gastro intestinal, Respiratory, Musculoskeletal system can be managed effectively by the use of rasadravyas. so, all the rasadravyas play a vital role to treat the diseases especially occur in the old age group.

## **Conclusion**

Geriatrics is a branch of medicine concerned with the problems of ageing including Physiological, Pathological & Psychological disturbance. The rasadravya as Rasayana helps to prevent or manage the different disease conditions of old age. Rasayana effect of these dravyas helps to improve the immunity, physical as well as mental strength, increase the longevity, nourish the rasadidathus. there are many rasadravyas which act as rasayana. these are the best choice of drugs in geriatric care due to its minimal dosage and quick action.

# RasaBhasmaandGeriatricdisorders

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## AbstractBackground

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Rasa Bhasma is a unique therapeutic methodology to delay ageing and to minimize the intensity of problems occurring in the degenerative phases of one's life. Here, Rasa words denote incinerated mercury and metal-mineral. It is the demand of the hour to develop an effective holistic protocol for geriatric care. The so-called geriatric giants are the major categories of impairment that appear in elderly people, especially as they begin to fail. These include immobility, instability, incontinence and impaired intellect/memory, osteoarthritis and osteoporosis, diabetes mellitus, benign prostatic hypertrophy, respiratory disease and many more.

## Aim:

To compile literary works from Rasagrantha and available research works of Rasa Bhasma used in geriatric disorders.

## Materials and methods:

All the references related to Rasa Bhasma in Rasoddharatantra additionally in other Rasa texts such as Rasaratnasamuccya and Rasatarangini were screened by its therapeutic utilities as preventive and curative aspects in geriatric disorders.

## Results and discussions:

From the above facts and findings, it becomes clear that, Rasatarangini and Rasaratnasamuccya has mentioned Parada, Maharasa (Abhraka, Vaikranta, Makshika, Shilajatu, Sasyaka) Uparasa, (Gandhaka, Haratala, Manashila, Nilanjana) Sadharana Rasa (Hingula), Dhatu (Swarna, Rajata, Lauha, Naga) and all Ratna are indicated as Rasayana and elements of Sudhava gain diseases related to degenerative changes in geriatrics.

## Conclusions:

This review makes clear idea about Rasa Bhasma with its therapeutic utilities in geriatric care.

**Key words:** Rasa Bhasma, Rasaratnasamuccya, Rasatarangini, Rasoddharatantra, Geriatrics.

## Introduction

It means that if metals/minerals are properly incinerated/calcined into fine powder form, on internal use they get absorbed and assimilated into the biological system like Adya Rasa Dhatu: primary physiological fluids essential for survival of human. They get converted into targeted drug form and their proper use may eradicate all types of ailments and their prolonged use provides good strength and immunity power to the life with ultimate delayed ageing process.

Ageing is not a disease however; the risk of developing disease is increased. Ageing may be considered to be the loss of adaptability of an individual with time. Geriatric syndromes refer to a symptoms presentation that is common in older adults. Geriatric giants are immobility, instability, incontinence and intellectual impairment.

Jarachikitsa and Rasayana methodologically delay Vriddhavaस्था (ageing) and reduce geriatric degeneration. Rasa Bhasma, an organo-metallic compound is one such compound described in Rasashastra for treating geriatric problems are best confronted by Rasayana drugs.

Rasayana means the therapy which produces the best quality of Rasa, Rakta Dhatu and other Dhatu. By using of Rasayana, person achieves long life, sharp memory, intelligence, optimum health, youth, luster and better color complexion.

## Materials and methods

of skin, better voice, optimum strength of the body and sense organs, Vaaksiddhi (what he says becomes true), popularity, brilliance and many more.

A review of Rasagrantha i.e. Rasaratnasamuccya, Rasatarangini and Rasoddharatantra has been made. The research works regarding the utility of Rasa Bhasma were compiled and screened to validate the classical concepts of utilization of Rasa Bhasma in geriatric disorders. Correlation between biological response and health benefits of Rasayana drugs was also screened and the gathered information is presented in tabular form.

**TableNo.1:ShowingRasaDravyasandBhasmaindicatedasRasayanainbelowmentionedthreeRasagrantha**

<b>RasaDravyaandBhasmaas Rasayana</b>	<b>Rasagrantha</b>		
	<b>RRS</b>	<b>RT</b>	<b>RDT Bhasma PishtiPrakara na</b>
<b>Rasa</b>		7/85	
<b>Maharasa</b>			
<b>Abharka</b>	2/9	10/12	Verse 9.P.414
<b>Vaikranta</b>	2/56	23/167	Verse275,p. 441
<b>Makshika</b>	2/80	21/26	Verse321,P. 446
<b>Shilajeeta</b>	2/116	22/84	-
<b>Sasyaka</b>	2/128		-
<b>Uparasa</b>			
<b>Gandhaka</b>	3/16	8/37	-
<b>Kasisa</b>	3/58		-
<b>Haratala</b>	3/66	11/55	Verse333,p. 447
<b>Manashila</b>	3/91	11/116	-
<b>Nilanjana</b>	3/104	-	-
<b>Kankustha</b>	3/112	-	-
<b>SadharanaRasa</b>			
<b>Hingula</b>	3/140	-	-
<b>Dhatu</b>			
<b>Swarna</b>	5/8	13/69	Verse314,p. 445
<b>Rajata</b>	5/24	16/15	-
<b>Lauha</b>	5/88	-	-
<b>Vanga</b>	-	18/39	-
<b>Ratna</b>			
<b>Hiraka</b>	-	23/24	Verse 270,p.270
<b>Manikya</b>	-	23/57	-
<b>Gomeda</b>	-	-	Verse71, p.422
<b>Neelama</b>	-	-	Verse126,p.



			126
<b>Panna</b>	-	-	Verse142,p. 429
<b>Vaidurya</b>	-	-	Verse283,p. 442
<b>Suryakanta</b>	-	23/184	-
<b>Rajavarta</b>	4/6		-
Visha			
<b>Vatsanabha</b>	-	24/26	-
RRS- RasaratnasamuccyaRT- Rasatarangini RDT-Rasoddharatantra			

**TableNo.2:ShowingcorrelationbetweenbiologicalresponseandhealthbenefitsofRasayanadrugs.**

<b>Sr.No.</b>	<b>Biological response ofRasayanadrugs</b>	<b>Relatedhealthbenefits</b>
1	PotentiatingRasaDhatu	Skinrigidity&hair pigmentation
2	PotentiatingRaktaDhatu	Beauty, circulation & elasticity
3	PotentiatingMamsaDhatu	Physicalstrengthandcompact bodytone.
4	ControlMedhaDhatu	Numbnessreduces& enhancedalertness

Properties ofRasa Bhasma given in classical text and research work done on RasaBhasmaasitsRasayanaActivity

### **AbhrakaBhasma**

Abhraka Bhasma is Mahavyadhihara, Dehasiddhikara, Jaranashaka and VairupyanashakaAbhrakaBhasmainhibitsyeastcellgrowth,butNoantibacterialactionisfoundAbhraka Bhasma hasbeen found to increasethe median lifespan of flies, to strengthenthe locomotoryabilitiesandtoincreasethematingefficiency.Furtherstudiesarehoweverneededtounderstandtheexactmechanismoftheseresponses.

### **VikrantaBhasma**

Vikrantaisvery importantowingtoitspropertyessimilartothatofVajra.ItisAgnideepana,Medhya,Yogavahi,Ja

rashoshadinashana,Dantdardhyakara,SwasakaharaandRasayana

## **MakshikaBhasma**

It is best among all Rasayana and prevents one from Jara and Vyadhi

## **Shilajeeta**

It is Tikta Rasa, Katu Vipaka, Mutrala and Yogavahi. It is useful in Kshaya, Swasa, Plihavridhi, Jwara, Agnimandhya, Apasmara, Unmada, Udararoga, Prameha, Udara-Shula, Urakshata, Hrdya Roga and Vatarakta Roga. Shilajeeta has Ojovardhaka and Pramehaghna qualities. It also stabilizes vitiated Doshas. Shilajeeta imparts good quality in Ojas, Rasa, Majja, Mamsa and Meda. It provides longevity and strength, acts as a rejuvenator and possesses anti-ageing effects. Preclinical investigations about Shilajeeta indicate its great potential uses in certain diseases, and various properties have been ascribed, including anti-ulcerogenic properties, antioxidant properties, cognitive and memory enhancer, antidiabetic properties, anxiolytic, anti-allergic properties and immunomodulator, anti-inflammatory, analgesic, antifungal properties and ability to interact positively with other drugs. It also has protective properties in high altitudes neuroprotective agent against cognitive disorders.

## **SasyakaBhasma**

It is Tridosha-Visha-Hridaroga, Gudaroganashaka, Shula, Kustha, Amlapitta, Vibandhanashaka, Rasayana, Vamaka, Virechaka and Swetkusthanashaka. Antimicrobial study shows that, Tuttha Bhasma is having better antifungal properties than anti-bacterial properties.

## **Gandhaka**

It is having actions like Deepana, Pachana, Krimighna, Amashoshaka, Visharpa, Dadru, Kushtahara and Rasyana. It also has anti-infective, antibacterial, bactericidal, antimicrobial Rasayana (Rejuvenator) and immunomodulator actions. Gandhaka Rasayana is a herbo mineral formulation which is commonly used in skin and urinary tract disorders. It is given in Mootrakricchra (Dysuria), Mootradaha, UTI, and skin disorders like scabies, furunculosis, Taenia infection, Padadaria and paronychia.

## **KasisaBhasma**

Kasisa Bhasma is Deepana, Amashoshana, Valipalinashaka, Switraghna and Rasayana. It is proven anti-anemic and hepato-protective activity.

## **HaratalaBhasma**

Haratala Bhasma is indicated in various disease conditions. Hence, it can be used as Avasthika Rasayana. But during its use, safety of the drug should be ensured by following proper Shodhana and Marana procedures. Studies should be conducted to observe its efficacy in healthy individuals as Rasayana and in patients of acute promyelocytic leukemia (APL) as an adjuvant drug.

## **ManashilaBhasma**

ManahshilaisusefulinKustha,Swasa,Kasa,KshayaRogaanditistop-tieramongall Rasayana Dravyasbut this arsenical drug has not been used so far independently as a single drug. Shuddha Manahshila has been described in various Rasa Yoga preparationssuch as Swasakuthara Rasa, Rajamriganka Rasa.In vitro anti-inflammatory activity ofpurified Manashila against the denaturation of the protein and heat-induced hemolysis of theerythrocytehasbeenfound.

## **Nilanjana**

ItisGuru,Snigdha,Netrya, TridosaharaandRasayana

## **Kankustha**

ItsaidprimaryforRasa and RasayanaKarma

## **Hingula**

HingulaisSarvadoshaghna,Sarvarogahara,Deepana,Vrishyaand Rasayana.

Hingula(cinnabar)is prime sourceofMercury. Shodhita Hingula is very goodmedicineinvariousconditionslikeJwara,AamavataandPrameha.Itcurespermatorrhoea ,leprosy,skindiseases.

## **SwarnaBhasma**

ItisVrishya,Hrdya,Netrya,Smritiprada,MedhyaRasayana,Punsavanopypgi,Vishhar,Ka ntikara,Varnya,VisamaJwarahar, AntraShoshaKshayagham

Anti-cataleptic,anti-anxietyandanti-depressantactivityaswellasAntioxidant/restorativeeffects against global and FocalModelsofIschemiaareproven. SwarnaBhasma found beneficial in neurological/glandular conditions, B-chronic LymphocyticLeukemia(BCLL),arthritis,cancerdetection,andTesticularSteroidogenicandG ametogenicFunctionsimprovement.Free-radicalscavengingactivityandImmunomodulatoryeffectofSwarnaBhasmaaisalsoproven.

## **RajataBhasma**

It is Sheeta, Kashaya, Amla, Sara, Balavardhaka, Snigdha, Ruchikaraka, Lekhana,Shukramehanashana,Ayushya,Vayasthapaka, Vrishya, MedhyaandVatapittanashaka.

AntimicrobialstudyandFree–radicalScavengingactivityis proven

## **LauhaBhasma**

Lauha Bhasma is Ruksha, Khara, Madhura, Tikta, Ushna, Kustha, Jathara, Kapha-Pitta,Panduhara,Deepana,RasayanaandBalakara

## VangaBhasma

VangaBhasma is Laghu, Ruksha, Sara, Medhya, Rasayana, Chakshushya, Sarvapramehahara, Swasa-kasahara, Vrishya, Balya and Shukravardhana

Research to support the classic literature has shown excellent results of VangaBhasma in genital or-

urinary disorders such as the capacity of testicular regeneration, Madhumeha, Anaemia, Asthma and gastric ulcers

## RatnaBhasma

All Ratna are useful for Rasa and Rasayana Karma

From above facts and findings some of the common diseases faced in old age and useful Rasa and aushadhi is tabulated.

**Table No. 3: Diseases faced in old age and useful Rasa and aushadhi**

Sr. No.	Disease	Rasa and aushadhi
1	Respiratory system	Abhraka, Parada, Gandhaka, Manashila
2	Cardiovascular diseases, hypertension	Abhraka, Swarna, Tamra, Loha
3	Diabetes	Shilajeeta, Naga, Vanga,
4	Musculoskeletal system	Swarna, Rajata, Loha,
5	Eye and Hearing problems	Swarna, Rajata, Loha,
6	Digestive problems	Parada, Gandhaka
7	Nervous system	Swarna, Rajata,
8	Skin problems	Gandhaka, Tutha

## Discuss in

In today's era, human life has been affected by drastic changes in atmosphere, diet and lifestyle and thus, the biggest challenge for humanity is to survive in this changed environment and compete with the pace of life. Further, newly emerging infections and metabolic disorders have posed challenges to health-care systems. To meet this challenge, awareness among mass regarding preventive use of Rasayana as prophylactic can be introduced. Some Rasayana are also disease specific and are used in specific disease states as they induce specific immunity and bio-strength to combat a particular disease. Such Rasayana is called as Naimittika Rasayana. The tissue-specific Rasayana drugs

can be administered along with the treatment of the underlying disease to enhance the tissue

strength and disease-combating power so that faster and better relief may be provided and recurrences may be prevented. Few researches in the past have proved their immunomodulating actions. Clinical trials have shown that the use of appropriate Rasayana drugs to the treatment of allergic disorders such as eczema, urticaria, allergic rhinitis, and bronchial asthma helps for better and faster relief and prevents recurrences. Similarly to combat autoimmune disorders such as rheumatoid arthritis or cancer or pulmonary tuberculosis, advocating Rasayana drugs as adjuvant to on-going medicines can also provide encouraging result and improve quality of life of patients. Furthermore, in stress-induced conditions such as anxiety and insomnia or neurodegenerative conditions such as Parkinson's disease, Alzheimer's disease, and senile dementia, administration of Medhya Rasayana (nootropics) provides marked improvement in the quality of life of patients and for all the drugs in Sudha Varga have calcium in compound form, as salt. Calcium has very essential role in physiology related to bone structure as well as regulation of Gastro intestinal secretions. As these having Sheet Veerya in all the Sudha Vargiya Dravya the acid neutralizing capacity is present due to higher pH value.

## **Conclusion**

The findings of all these studies indicate that Rasayana has a definite role to play in the maintenance and preservation of health, and appropriate use of Rasayana can help in bringing down the prevalence of many diseases, ultimately reducing health-care burden. Time has come when more focus shall be done on preventive aspects of diseases, and thus, the present policy of health-care system shall deal with awareness among the mass about Rasayana utility. Quality of life is important for an individual, and thus, researches in Ayurveda shall also focus on identifying key areas of application of Rasayana and sufficient evidence shall be generated with guidelines so that Rasayana therapy can be included in the National health policy and Ayurveda can contribute for the betterment of humanity.

Though Rasa Bhasma having Rasayana properties, acts by preventing the old age and diseases in the healthy person. On scientific basis, Rasayana Karma can be analogous with Anti-oxidant, Anti-ageing, Adaptogenic, Nootropic and cognitive, immunomodulatory activities. Considering this, a meticulous screening was done through three Rasagrantha to analyze Rasa Bhasma for its Rasayana Guna and avail oneself of geriatric disorder

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# **COSMETOLOGY IN GERIATRICSROLEOFYASHADBHASMAINS KINCARE**

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The united Nations General Assembly declared 2021-2030 the „Decade of Healthyageing“andaskedWHO toleadtheimplementation.Every human beingpasses thestages of age in their life. As the age increases there are numerous changes happening inour body. In Ayurveda this old age stage is called Vriddhavastha or Jirnavastha. DuringvriddhavasthatheVatadoshaispredominant,dhatusgetsdegeneratedastheageadvances due to prolonged structural and functional changes happening in our body.Aging is one aspect which affect the physical appearance of a human being first .Thecomplexion and texture of the skin reduces as age increases. The most signs of agingstarts from the skin. Skin becomes sagging, dryness, pigmented, wrinkles. The Humanskin loses its antioxidant ability with age. Zinc deficiency is commonly seen in old age.Zincisanessentialmicronutrientrequiredformanybiologicalprocesses,includingGrowth and development, neurological function and immunity. Zinc is mainly present inBones, teeth, hair, skin, liver, muscle, leukocytes. Zinc is a important nutrient for healthyskin.

Ayurveda has mentioned minerals & herbs for skin care. In ayurveda Zinc is used inthe form of Yashad bhasma. Use of the yashada Bhasma cures Zinc deficiency, cold-cough, eyes diseases, hair loss, graying of hair in old age. Antiaging treatment includestwotypesoftherapiesUrjaskara(promotive)andVyadhihara(curative).Thepresentpa per will highlight on how the yashada bhasma acts on skin. Zinc is a essential mineralfor the production of collage and elastin, this proteins that keep our skin looking plumpandwrinklefree.Duetoitsastringentproperty ithelpsinregulatingoilorsebumproductiononskin.Yashadabhasmahasawholeisbest inGeriatrics.

**Keywords-**Yashadabhasma,Zinc,Jirnavastha

## **INTRODUCTION**

Ayurveda has given importance for Age in the human beings.Ayurveda describesAyu has Hita ayu, Dukhayu, Ahitayu and sukhayu with description of total life span1.According to Ayurveda the life span is divided into three parts known as Vaya. Theseare Balyavastha, which last upto 16 years; Madhyavastha, which last from age 16

years to 60-70 years; and Vriddhavastha or Jirnavastha, which refers to period after 60-70 yrs

plus2. Aging is a continuous process and it cannot be stopped. Vriddhavastha is a stage where the Dhatus and Indriya gets affected. Vata dosha is more predominant during this stage and Rasadi dhatus are in deficient state3. Aging is universal process that began with the origin of life. Age is one aspect which affects the physical appearance of a human being first. The complexion and texture of the skin reduces as age increases. The most signs of aging starts from the skin. Skin becomes sagging, dryness, pigmented, wrinkles. The human skin loses its antioxidant ability with age.

## **METHODOLOGY**

### **Ayurveda In Skin Health**

Ayurveda has an important role in cosmetology. Beauty of a person lies in the skin. Skin is the largest organ in our body which protects humans from external environment and also reflects the functional integrity of internal organs4. The sense of touch is felt through the skin. Bharjaka pitta plays an important role in skin health. Functions of Bharjaka pitta are Prabha, caya, Dehamardavam. When these functions are affected in old age there will be loss of luster of skin, atrophy, wrinkles, loss of elasticity. Charaka has described Twak in six layers. Sushruta has described same in seven layers viz. avabhasini, lohita, shweta, tamra, vedini, rohini and mamsadhara. Avabhasini, is the outermost layer, reflects the complexion and quality of rasa dhatu. Mamsadhara is the innermost layer which maintains the stability and firmness of the skin.

### **Skin Aging**

The signs of skin aging are atrophy, laxity, wrinkling, sagging, dryness. Symptoms of chronological aging include dry and thin skin, fine wrinkles, abnormal blood vessels, age spots. Intrinsic aging is determined by genetic and hormonal status5. Photoaging involves damage to collagen and elastin fibers in the skin. In ayurveda in vata skin is Dry, thin, delicate and cool to touch. Pitta skin is fair, soft, warm and photosensitive and has least tolerance towards sun. Kapha skin is thick, oily, soft and cool in touch. During old age vata dosha is predominant so skin will be dry, thin and delicate.

### **Importance of Zinc in skin**

Zinc plays an important role in skin health. It is needed for protein synthesis and wound healing. It acts as an antioxidant. It also helps to break down substance P, transport vitamin A from liver and helps in the metabolism of omega 3s. Mild deficiencies in zinc can impair collagen production, fatty acid metabolism and wound healing. Zinc is needed for building keratin and for the formation of the skin's structural protein-Collagen. Collagen is produced by zinc dependent enzymes called collagenases. Zinc is essential for cross linking that gives collagen its durability and stability. Skin contains a high zinc content (5%) within the epidermis. Because of its abundance in the epidermis, mild zinc deficiency rapidly leads to roughened skin and impaired wound healing. In

terms of skin health, Zinc is vital for cell growth, collagen formation and for wound healing.<sup>6</sup>

## **RESULTS**

### **Zinc Deficiency in old age**

Zinc deficiency in elderly include inadequate food chewing, intestinal malabsorption, psychosocial factors. Zinc deficiency in skin causes Dry skin, acne, skin lesions, decreased wound healing, Dermatitis<sup>7</sup>.

### **Yashadabhasma in Skincare**

Ayurveda has explained many herbs, minerals, metals for skin care. In ayurveda Zinc is used in different forms of medicine. It is used as Yashadabhasma. Ayurvedic literature describes the activities of yashadabhasma as krimighna (antimicrobial), kanthikara (improves complexion), Rasayana (rejuvenator) and Grahi (improves moisture holding capacity of skin)<sup>8</sup>. It is used in cosmetics for skin healing, wound healing, sun protection action. Use of the yashada Bhasma cures Zinc deficiency, cold-cough, eye diseases, hair loss, graying of hair in old age.

## **DISCUSSION.**

Cosmetology is one major fast growing branch in the industry. There are many skincare products which cause adverse drug reaction in skin, skin allergies. In old age our skin undergoes numerous changes. As age increases cell renewal slows down. The skin feels rough and scaly. In ayurveda as age increases, homeostasis between the tridosha is disturbed. Kapha decreases with increase of vata, thus there is disturbance in pitta too. This impacts the other components of the body. In old age due to Vikrita vata, visamagni, kseena kapha, the first dhatu is not formed properly and thus rest of dhatus are not formed<sup>9</sup>. This may lead to Zinc deficiency in old age. Zinc deficiency in skin causes Dry skin, acne, skin lesions, decreased wound healing, Dermatitis. As per ayurveda vata skin is Dry, thin, delicate and cool to touch. Pitta skin is fair, soft, warm and photosensitive and least tolerance towards sun. Kapha skin is thick, oily, soft and cool to touch.

During old age vata dosha is predominant so skin will be dry, thin and delicate. Zinc is an essential mineral for the production of collagen and elastin, this protein that keeps our skin looking plump and wrinkle free. Zinc is needed for building keratin and for the formation of the skin's structural protein-

Collagen. Collagen is produced by zinc dependent enzymes called collagenases. Zinc is essential for cross linking that gives collagen its durability and stability. Antiaging treatment in skin includes two types of therapies Urjaskara (promotive) and Vyadhihara (curative). Urjaskara promotes preventive aspects to enrich texture of skin<sup>10</sup>. In ayurveda the metals are used in the form of Bhasma. Bhasma

is an ash obtained by calcinations of metals. It is a unique preparation of Ayurveda with extracts of herbs and metals in combination which functions best when

converted from their original metal to metal oxide forms. By nano technology in bhasmas it can be used as target oriented with efficacy and less toxicity. Yashada bhasma has kashaya, katurasa, Guna-Ruksha, Virya-ushna, dosha ghata-kapha pitta hara. Karma askrimighna (antimicrobial), kanthikara (improves complexion), Rasayana (rejuvenator) and Grahi (improves moisture holding capacity of skin). Kashaya rasa helps to regulate oil and sebum production. Katu, kashaya rasa helps in reducing vata. Vata dosha is maintained.

## **CONCLUSION**

Yashada bhasma is ultimate safe and effective natural substitute for all chemical based products. Yashada bhasma acts as Urjaskara and Vyadhihara. Yashada bhasma not only helps in skin problems but also other health issues such as Zinc deficiency, slow wound healing in old age. Potent in small dose, Does not have any specific taste. They can act quickly. Available in smaller particle size (Nanosized). Have good stability as compared to other dosage form. Yashada bhasma being Rasayana acts at the level of Rasadhatu, Agni and Srotas and best for geriatric.

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# STUDY ON BENEFIT OF KARKITAKA KANJI IN GERIATRICS

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## **ABSTRACT**

Geriatrics is a progressive irreversible phenomenon of body rather than disease. It is manifested as a medical as well as social problem. Ayurveda emphasises holistic sense to offer curative as well as promotive way to explore the problems. Ayurvedic concepts believe in prevention of disease as well as cure of disease. The major preventive approaches for maintaining and improving the quality of life include daily regimen, seasonal regimen, behavioural and ethical considerations. The drugs which are similar to the body parts by structures, properties, actions and also conductive are used as medicinal drugs or diets. Elderly people have different nutritional requirements compared to the normal adult population. Nutraceutical is a food with a medical-health benefit, including the prevention and treatment of disease. Plant-based traditional knowledge has become a recognized tool in search for new sources of drugs and nutraceuticals.

Kerala is known for Ayurvedic treatment and in many cases the treatment is influenced by traditional folk medicines. Karkitaka kanji is a nutraceutical porridge like preparation made from grains, gram and medicinal herbs administered during Malayalam month, Karkitaka, which normally fall in either June or July or August month covering a part of South West Monsoon. With heavy rain, the temperature goes down that makes the body to fight diseases difficult. Immunity is low at this point and our body needs proper diet and treatments designed for this tough time to battle all kinds of diseases. It is considered that special considerations should be given to the body during this month by providing various health care like supplementation of

nutraceuticals and rejuvenation of body. The Kanji helps in the rejuvenation of the body to fight disease and boost immunity. The only limitation is to consume it in multiples of 7 days continuously to get the best of the benefits. The Kanji is ideal for the control of diabetes and cholesterol. With little to no fat, this dish is beneficial in ensuring that the body does not have any trouble digesting making it available for nearly anyone to consume this dish. Some of the ingredients used in Potimarunnu, which is served to mothers during post natal care are used as major ingredients and it may be due to the nutraceutical values of these same cereals and grams. This article discusses the major

benefitsof KarkidakaKanj,anAyurvedic porridgegivenaspartof theKarkidakaChikitsa.

## **INTRODUCTION**

Aging is a complex and inevitable biological process that is associated with numerouschronically debilitating health effects. According to an estimation the number of elderlypeople will be around 113 million in India. A major challenge to health care systems ishow to encourage and maintain a healthy lifespan in large and increasing populations ofelderly individuals. Healthy aging can be achieved by adopting healthy lifestyle practicesand consuming a healthful diet. Almost all the Ayurvedic classical texts described 8branches of Ayurveda. Among them Jara Chikitsa is one and is comes under GeriatricDepartment. Geriatrics is a medical practice that addresses the complex needs of olderpatients and emphasizes maintaining functional independence even in the presence ofchronic disease. Ayurveda has a crucial branch of medicine called Rasayana Chikitsa(Rejuvenation Therapy) which exclusively deals with the issues associated to aging

andmethodstocontravenethesame.Treatmentofgeriatricpatientsrequiresadifferentstrategya ndisverycomplex.Developmentofeffectivedietaryinterventionsforpromoting healthy aging is an active but challenging area of research because aging isassociated with an increased risk of chronic disease, disability, and death. The mostwidespread conditions affecting older people are hypertension, congestive heart failure,dementia,osteoporosis,breathingproblems,cataract,anddiabetestonameafew.Decrea sedimmunityisalsopartiallyresponsiblefortheincreasedmorbidityandmortality resulting from infectious agents in the elderly. Nutritional status is one of thechief variables that explains differences in both the incidence and pathology of infection.Elderly people are at increased risk for micronutrient deficiencies due to a variety offactorsincluding social,physical,economic,andemotionalobstaclestoeating.Individually,p eoplemustputincreasedeffortsinetoestablishinghealthylifestylepractices, including consuming a more healthful diet. Nutraceutical, a term combining thewords Nutrition and Pharmaceutical is a food or food product that provides health andmedical benefits, including thepreventionand treatment of disease. The rich Indiancivilization has provided evidence suggesting that foods can be effectively used as amedicine, to treat and prevent diseases. Ayurveda has a rich literary documentation aboutAharaandVihara.AncientclassicaltextslikeCharaksamhitatonewerclassicsBhavaprak ash,havementionedguidelineaboutNutrition.It hasmentionedthatifamanis practicing wholesome diet there will be no need of medicament. Like-wise the bestavailable medicine will not be effective if he is not following dietary restrictions. Thisarticle discusses the major benefits of Karkidaka Kanji, an Ayurvedic porridge given aspartoftheKarkidakaChikitsa.

## **Ayurvedic Concepts**

The main purpose of Ayurveda is “swasthasya swathya rakshyana” (Prevention of diseases) and “aturasya vikar prasamana” (Cure of the diseases). Ayurveda emphasizes both on prevention of disease and cure of the disease. According to Sushruta geriatric comes under Swabhavabalapravritta vyadhi. This is of two types viz. Kalaja (timely disease) and Akalaja (appearing before time). For geriatric diseases Ayurveda described Rejuvenation therapy or Rasayana chikitsa. All most all the classical Ayurvedic texts described about geriatric disease by means of Rasayanachikitsa. In Ayurveda the concept of Nutraceutical may not be compared as such with any of its basic concepts. But it has the concept of nutrition, dietary supplements, food regimen for patients and health combinations for pediatric to geriatric care in different context. As an example, Oushadhakanji in Kerala is a popular medicated food preparation in rainy season to prevent loss of appetite likely to happen then. Similarly gruel preparations along with some ash or raw drugs, for specific diseased conditions are advised. Acharya Kasyapa, the author of Kasyapa Samhita has mentioned Ahara (food) as maha- bhashaja (super medicine) in his text. Pathya is a broad term consisting Pathya Ahara, Pathya Vihara (personal hygiene). Nutraceutical may come under the concept of Pathya Ahara. The Pathya Kalpana (Ayurvedic dietetics) is mentioned for Healthy as well as diseased person for curing and recoup.

## **State of Dosha & Agni During Monsoon Season**

The sudden downpour and cooling of the environment after a harsh summer makes all the humors go out of balance in the rainy season. Nature of the season is cold and dry. Vata is naturally predominant in this season. Vata gets aggravated, Pitta accumulates & Kapha has no much interference during this season. Agni further get weakens. So one should take easily digestible foods. As disturbance of Agni is prominent & the strength is less, digestives and carminatives should be taken. Hence the regimens are focused

to balance all humors and aid digestion. Monsoon Ayurveda Treatments are essential to keep up with the state of Dosha & Agni during this season

## **Diet to Follow During Monsoon**

Oily, sweet, salty, sour and hot foods are advised. Old rice, wheat, jowar, food prepared of old grains, meat soup and soup of pulses processed with spices or carminatives are to be taken. Non harmful wines, fermented liquids (arishta), mardwika (dried red grapes) wines. As water can get polluted take care to drink only pure water. Drinking of boiled water (in little quantity as agni may reduce), soups and old honey are recommended. Kledayukta (oily), vata reducing, dried, light, snigdha (unctuous), madhura (sweet), ushna (hot), amla (sour), lavana (salt) tastes should be used on rainy or windy days. During days of heavy rain intake of easily digestible, honey mixed with

sour, salty, fatty and dry foods (dry ginger) as drinks & diets are beneficial. Spicy, bitter,

astrigent food must be avoided. Karkkidaka kanji is a special recipe during rainy season. It's a healthy tonic to boost energy, stamina & immunity.

### **Karkidaka Kanji-**

Ingredients of karkitakakanji are as follows-

- Shashtika Shali (Red rice) – 100gms
- Chandrashoora (Garden cress) – 10gms
- \*Dashamoola Choorna – 5gms
- \*Trikatu Choorna – 5gms
- \*Dashapushpa Choorna – 10gms
- Broken rice – 10gms
- Medhika (Fenugreek) – 10gms
- Jeeraka (Cumin) – 10gms
- Coconut milk – Quantity sufficient
- Jaggery – Quantity sufficient
- Water – Quantity sufficient

### **\*Dashamoola–**

1. Bilwa (Aegle marmelos)
2. Agnimantha (Clerodendrum phlomidis)
3. Syonaka (Oroxylum indicum)
4. Patala (Stereospermum saveolens)
5. Gambhari (Gmelina arborea)
6. Gokshura (Tribulus terrestris)
7. Brihati (Solanum indicum)
8. Kantakari (Solanum surattense)
9. Saliparni (Desmodium gangeticum)
10. Prishniparni (Uraria picta)

### **\*Trikatu –**

1. Pippali (Piper longum)
2. Maricha (Piper nigrum)
3. Shunti (Zingiber officinalis)

### **\*Dashapushpa–**

1. Viparitalajjalu(Biophytumcandolleianum)
2. Bhadra(Aervalanata)
3. Sakralata(Cardiospermumhalicabum)
4. Lakshmana(Ipomeaserpiania)
5. Sahadevi(Vernoniacineria)
6. Durva(Cynodondactylon)
7. Musali(Curculigoorchioides)
8. Vishnukranti(Evolvulusalsinoides)
9. Bhringaraja (Eclipta alba)
10. Sasasruti(Emiliasonchifolia)

### **MethodofPreparation:**

Boil 1 glass of water with 10 gms Dashamoola Choorna. Add 100 gms of red rice to it& continue boiling by adding Jeeraka, Trikatu Choorna, Medhika, Broken rice. Once thericegetscookedaddDashapushpapowder/extractalongwithsufficientquantityofCoconut Milk & Jaggery. Serve when hot to get complete result once in a day duringMonsoonseason.

Add Putharichunda (Solanum trilobatum) and Kurunthotti to the gruel for treatingAsthma. Patients suffering from Hyperlipidaemia can add curry leaves, Thazhuthamma(Boerhavia) and Muthira (Horse gram) to it. Thazhuthamma is also good for patientssufferingfromkidney-relateddiseases.

### **DISCUSSION**

Monsoon season is when Vata dosha is naturally predominant in our body. It getsaggravated and causes accumulation of Pitta Dosha. This disturbs the natural balance ofourbodyandweakenshthedigestivefireorAgni.Thus,toregainthebalance,aiddigestion and to maintain health, Ayurveda recommends taking up Karkidaka Chikitsa(Ayurveda during monsoon season) along with the consumption of Karkidaka Kanji. TheOushadha (medicine)kanji help to get rejuvenated for the monsoon. This kanji is aunique combination of herbs, spices, and grains that would keep the monsoon fevers atbay and prevent against some of the common diseases of the rainy season like arthritis.ThisisaspecialdietinAyurvedawhichisgoodforthepeopleofallagegroupsasithelps to improve the immunity of the body and acts as a detoxifying agent. KarkidakaKanji can be prepared at home, and can be practised throughout the country duringmonsoonseason.ItisrecommendedtohaveKarkidakaKanjicontinuouslyeitherfor7

days, 14 days, 21 days or 28 days for optimum results. The health benefits of having it are as follows:

1. Helps in regaining strength and improves immunity.
2. Rejuvenates your body during monsoon season.
3. Keeps monsoon-related ailments like fever, cough, arthritis, etc.
4. Good for regulating diabetes and cholesterol.
5. Aids digestion and removes toxins from the body.

## **CONCLUSION**

Nutraceuticals made from widely-consumed plant products promote longevity, improve health-span, and protect against aging and stress. The diet composition-dependent effects will have a significant impact on the increasing demand for personalized nutritional intervention. Ayurveda has given more importance to the Geriatric problems through Single and Compound drug helpful for various elderly problems needs research to prove its effect in present scientific

way. Karkidaka month is all about heavy downpours and calls for regular consumption of Oushadha Kanji or Karkidaka Kanji. The medicinal gruel is a unique combination of Ayurvedic ingredients that has special therapeutic benefits which help in overcoming ailments caused during monsoon season and also to boost one's immunity. Karkidaka Kanji is traditionally consumed during nights as a substitute for dinner. The main

healthy benefits of Karkidaka Kanji in geriatrics are it helps to boost immunity, helps in detoxification, aids digestion, reduces cholesterol and improves bowel movement.

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# **Role of Rasoushadhies in Pakshaghat**

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**Abstract** – Pakshaghat is a Vataj Nanatamaja Vyaddhi vikara of Charak it is not Sudhha Vataja condition there is Samsarg of Pitt and Kapha, mentioned in Sushruta and Madhavanidan . Pakshaghat is correlated with Hemiplegia , which results from cerebrovascular accident i.e. stroke is defined as sudden onset of neurologic deficit .It affects Sira and Snayus of one half of the body and face. The aim of study is pakshagaht is one of the most common causes of death especially in elder age group because in geriatric period of time mostly vata dosha is predominant and due to today's life style aevata vrudhhi will occur so this is the reason I have chosen this topic review of Rasoushadhies in Pakshaghat.

**Keywords**-Pakshagaht, Rasoushadhies, Hemiplegia, Vataj vyadhi.

**INTRODUCTION**-The Pakshaghat is an important disease enlisted in vatavyadhi context in . it is characterized by motor or sensory (or both) impairment in Ayurveda here impairment of karmendriya, Gnyanendriya's failure in any one side of the body. When it is affected in all the four limbs it is called as Sarvanga vata. When the clinical presentation is affected only one limb it is called Ekanga vata. It may be associated with facial palsy (Ardit) and speech difficulties like aphasia (vaksanga).

## **MATERIAL & METHODS**

Ayurvedic review of literature on Rasoushadhies in Pakshagaht

Ek Dravyachikitsa, Kharliya Rasayana, Parpartikalpna, Kupi Pakva Rasayana, Pottali Kalpna.

## **Disease review-**

**Vatavyadhi well understood under 3 broad heading**

**Gatvata pathologies like kukshigatavata, koshtagatavata etc. Aavarana pathologies eg. Anyavrana and anyonyavarana.**

**Vata vyadhis-** Ashita vata

**vikaras. Organs involving in**

**vatavyadhi –Dhamaniesrelated –**  
DmaanaatAnilapurannatDhamanyaha-

## **Chakrapani-**

Vata is propelled thro

**Sushruta** explains “Rasavaha, Shabhdavaha and Yogavaha Dhamanies... ie if Dhamanie is affected Akshepaka, Apatanaka, Pakshaghata etc. affected.

## **Vata and strotas**

Similarly mastulunga and vata (CSF

rhinorrhea) **Hridaya affected** – Seat of

buddhi (proper judgement) **Rasshashtra.**

Rasa Shastra is a branch of Ayurveda that was mainly developed in the vedic period. Rasa Shastra incorporates not only Rasa, but also Maharasa, Uparasa, and Sadarana Rasa etc. Hence the formulation which consists above as one of the constituents can be termed as Rasaushadhi

## **Importance of**

### **Rasaushadhi According to Rasa**

#### **Samgraha**

- Very quick in action.
- Small dose is required as compared to herbal dose.
- Easy to take, so patient's acceptability is more.
- Long shelf life as compared to herbal medicines.

### **According to Rasa Sara Samgraha**

We should treat Sadya types of diseases by using any type of medicine, but in case of Asadya Rogas Rasaushadhi is a best choice.

### **According to**

#### **Rasapaddhati. Treatments are**

#### **of three types**

- Daivi – Treatment which carried out with Rasa Dravyas.
- Manushi - Treatment carried out with Churna, Sneha, Kashaya, and Lehyas.
- Asuri – Treatment carried out with Sastras.

### **Treatment protocol**

Vata Vyadhi Chikitsa:

**VyadhiPratyanikam**-snehnam,sewdan ,shamanam,brihamanam,anulomamanam.

**Mukoushadhi**-Bhallataka,Guggulu,Rasnalashuna,malla, masha,Tamra,Hemaetc.

**Koshatashritvata–**

vatavyadhwamsarasa,shankhavati,parpatikalpnaswithnimbupanakaslavanam.

**Sarvangakupit vata-** vatavidwamsa mishrana,withgrita+ushnodaka

**Gudastithavata–**chukratailamwithushnagudhamanupanam

**Tableno 1–Ek drvyachikitsa.inpakshaghat.**

sn	Ek dravyachi kitsa	Refferances	Uses
1	Abhrak	RRS 2/2	Vat-pittaghna
2	Makshika	RT21/26-28	
3	Shilajatu	RT22/84-86	Vatpittakshayagna,Nadishoolagna
4	Gouripashana	RT22/16-118	
5	Hartala	RRS 3/73	Vataghnadrug
6	Manshil	RRS3/94	Vataghnadrug
7	Suvarna		Vataghna drug,rasayan
8	Abhraka	RRS 2/2	Vataghnadrug
9	Vimal	RRS 2/101	Vatghna,vatpittakshayghan
10	Visatinduka	RT 24/185	Nadishoolagna
11	Kansya		Vatpittakshayagna
12	Naga	RT 19/44	Vataghnadrug
13	Tuttha	RRS2/122	VataghnadrugVatpittakshayagna
14	Rasanjana	RRS 3/103	VataghnadrugVatpittakshayagna
15	Rajata	RRS 5/27 , AP3/87	Vataghnadrug,Vatpittakshayagna ,nadishulahna

**AdvantagesofRasshastraandRasoushadhhis**

In Ayurvedic practice the Rasaushadhis has been considered as more useful and effective when compared to herbal preparation. It is said that the RasaShastra has immense therapeutic applications some of which are prevention of ageing and reduction in age related disorders. The assimilation of Rasa preparations in the body is much faster because the preparation undergoes different processes called Samskaras. This helps in active and quick assimilation of even the minute doses in the body. Apart from mercury there are properties. Foreg: Swarna, Rajata, Shilathuet c.

**TableNo 2-RasoushadhiesusedinPakshagaht**

Khalviya Rasayana	Parpati Rasayana	Kupipakva Rasayana	Pottali Rasayana
Ekanagaveerarasa	Tamraparati	Sameerapannaga rasa	Ratnagarbhapottali
Chandraprabhavati	Sarveshwaraparpati	Makaradwaja	Hemagarbhapottali

Arogyavardhini		Mallasindoora	Mallagarbhapottali
Khalviyarasayana	Parpatirasayan	Kupipkwa Rasayana	PottaliRasayana

Rassarajsarasa			Vishagarbhapottali
Brihatvata chintamanirasa			Tridhatugarbha pottali
KKampavataariras			
Khanjanikariras			
Pakshaaghatariras			

## CONCLUSION/DISCUSSION

Though Pakshaghata is difficult to manage, but if proper treatment is given at appropriate time with logical use of internal and external medicine, good results are obtained and patients remain self-dependant. Through practices we can state that use of Ras Rasayanas have equal importance in the treatment of Pakshaghata in peak period of vyadhi as an emergency treatment. The other rehabilitation therapy besides Rasaushadhi Panchkarma, Vocational therapy, Physiological etc. should also be incorporated for its complete management.

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# RasaushadhisinGeriatrics

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## ❖ INTRODUCTION

Geriatrics is defined as „a branch of medicine that deals with the problems and diseases of old age and the medical care and treatment of aging people“.

According to WHO, Geriatric is the age occurring approximately at 55 years.

During geriatrics many changes occur physiologically. Due to this many infectious susceptibility can occur and thus can lead to dreadful diseases as well as mental discomfort. When these changes are understood in a well manner then these conditions can be managed with the Rasaushadhis.

Rasaushadhis which are mentioned for Rasayana, Kshaya, Agnimandya, Aruchi, Jwara etc are indicated for geriatrics as during old age (Jara Avastha) Bala, Agni, Dhatu Kshaya, Ama Vikaras etc occur frequently so for those conditions these medicines can clear the pathology in better way.

## ❖ CONCEPT OF GERIATRICS

Old age, senescence, geriatric, aged people etc are synonyms used.

Old age is the age where infectious susceptibility remains persistent so various diseases like cancer, heart diseases, joint disorder, dementia, Alzheimer's disease etc occur.

This may develop as various alterations occur in innate and acquired immunity during old age which is often called as immuno-senescence. During immuno-senescence, progressive age-related increase of inflammatory cytokines and inflammatory markers will lead to chronic antigen load (bacteria, virus, fungi, toxins, mutated cells) which in turn stimulate innate immunity and lead to onset of typical age-related diseases.

Various factors play an important role to develop the pathology during old age. For eg. Impaired homeostasis and immunity will be a cause for Alzheimer's and

rheumatoid arthritis, decrease in adipose tissue, muscle and bone mass with malnutrition, vitamin and trace element deficiency will lead to development of frailty syndrome and impairment of infection resistance during old age.

#### ❖ **ROLE OF RASAUSHADHIS IN GERIATRICS**

Rasaushadhis are the medicines in which Parada etc minerals are processed with the herbal drugs and formulated into Kharaliya, Parpati, Pottali or Kupipakva Rasayanas.

In old age, the Rasaushadhis can be used wisely as per Agni, Bala, Vaya, Prakruti, Satmya, Satva, Samhanana, Roga Bala etc. as on that basis only, success of Rasayanatreatmentwillbedecided.

Rasaushadhis like Vasantakusumakar Rasa, Svarna Sindura, Makardhwaja, etc whichareindicatedin Rasayana VajikaranaAdhikara can be given.

AsSvarnaSindooraandMakardhwajahaveRasayana,Yogavahi,Vrushya,Kantivardhaka, Saumanasya effect, we can make probable inference that these medicineswill remove the Oja Kshaya, Dhatu Kshaya, Agnimandya, Ama Roga, etc. thereby actingonimmunesuppressingdisorderslikeheartdiseases,rheumatoidarthritis,diabetes,muscle weakness,paralysisetc.

AsVasantaKusumakaraRasahaveMadhuraRasa,SnigdhaGuna,ShitaVirya,Madhura Vipaka, Tridosahara Pradhanyata, we can make probable inference that thesemedicineswillremovetheBalaKshayaandcauseAgnivruddhithusincreasingtheimmunity and will decrease the inflammatory mechanism. Also due to Medhya, Vrnaya,Vrushya, Ayushya, Smrutibhransha Hara, Tusti Pusti Karak etc. Karma and due to aboveRasaPanchaka,itwillactonthememoryand willimprovethementalhealth.

Moreover for the other immunological disorders, the various medicines like PravalaPisti,HridarnavaRasa,VatavidhwansaRasa,MrutyunjayaRasa,etc canbegiven.

## ❖ DISCUSSION

ThustheRasaushadhis are helpingfactorsduringoldage.

As during that age, various emotional, mental, social, family matters arise due to lackof support or understanding, lack of love, care, attention, interaction among the familymembers.

Due to these factors and various pathological factors, the old age grow painfully andresultinimmune relateddisorders alongwithotherdiseases.

Thus with the supportive treatment of Rasaushadhis in Ayurveda we can help torebuild the strength, will power, memory, digestive power, immunity etc along with themodernwayofcounselling,mind relaxingtechniquesetc.

## ❖ CONCLUSION

Rasaushadhis will definitely have some sort of supporting effect if used wisely in oldagedpeople.

Consideringtheirseriousnessinrespectiveoldage,wecanusevariouskindofRasaushadhis respectively. Thus, Rasaushadhis and aged people should be handled withcare.

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# EVALUATION OF THE EFFECT OF CHATURBHUJA RASA IN KAMPAVATA

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## **ABSTRACT**

Kampavata is a slow progressive disorder of late adult life and is one of the most prevalent neurological disorders. Parkinson's disease, known in Ayurveda as "Kampavata," is a neurological disorder affecting 1% of the population over age 65 and is the fourth most common neurological degenerative disorder found in the elderly. In Charaka Samhita, Vepathu has been described as one of the eighty types of Vata nanatmajavyadhi and Kampa has been mentioned one among them. The present study objective is to evaluate the efficacy of Chaturbhuj Rasa in Kampavata. A simple random single group observational study is adopted here. Kampavata expresses the signs and symptoms as Karapadale Kampa, Dehabhramana, Nidrabhanga and Matiksheena. In Rasendrasarasangraha, Chaturbhuj Rasa is directly indicated for Kampavata. Thus an effort is made to evaluate the efficacy of internal administration of Chaturbhuj Rasa in Kampavata. In the present study 20 patients were registered after fulfilling the criteria of diagnosis in a single group. All the patients were examined before and after the trial, according to the case sheet format. Data before the treatment and after the treatment recorded and at the end of study both were compared for assessment. Statistical analysis showed that the treatment is more highly significant in the parameters, Kampa, Gatisanga, Stamba, Chestasanga, Tremors and Rigidity. In the parameters Stambha and Chestasanga there was no much difference in before and after treatment values statistically.

**Keywords;** Kampavata, Parkinson's disease, Chaturbhuj Rasa

## **INTRODUCTION:**

According to Ayurveda, Kampavata is a Vata Nanatmaja vikara. During the period of Charaka and Sushruta clinical manifestations of kampavata like kampa, sthamba, chestasanga, vakvikriti etc was not explained as one disease instead explained under various contexts majority of the symptoms of kampavata were found in kaphavrita udana and kaphavrita vyana but no single avarana process completely covers the symptoms of kampavata. Actually many of the experts tried to provide a suitable Ayurvedic nomenclature for the Parkinson's disease e.g. - sakamp-paksaghata and vepathu etc.

Kampavata (Parkinson's disease) is slow progressive disorder of late adult life and is one of the most prevalent and common neurological disorder occurs with more or less equal frequency in all countries around the world. In present era there are many such neurological disorders which are rising in their incidence day to day, such neurological disorders can be considered under the concept of vatavyadhi.

Kampavata (Parkinson's disease) being one of them having the pathology of degeneration in a part of the brain. Nearly two centuries have elapsed since disease Parkinson's is known, better treatment are still being sought.

In Ayurveda, Snehana, Svedana, Niruha basti, Virechana, nasya, Anuvasana basti and Sirobasti been indicated in management of Kampavata. The management of Kampavata can be done by the oral administration of Chaturbhuja Rasa which is explained in Rasendrasarasangraha 2 as it contains Rasasindhura, Swarnabhasma, Manashila, Haratala, Eranda, Kumari. The karma of Kumari and Eranda over nadivaha samsthana is balya and medhya indicated in conditions like mastishkya dourbalya, nadidourbalya and best in all vata vyadhis, Rasa sindhura and Swarna mitigates all types of roga and eventridoshas. The present study intended to focus on the disease evaluation i.e. kampavata and its management with Chaturbhuja rasa.

## OBJECTIVE:

**To evaluate the efficacy of Chaturbhuja Rasa in Kampavata.**

Lakshanas of Kampavata	Symptoms of Parkinson's disease
Kampa	Tremor
Matiksheena	Dementia
Vibandh	Constipation
Dehabhramana	Postural changes
Nidrabhanga	Insomnia

Lakshanas of Kampavata<sup>3, 4</sup> explained in the classics such as kampa, dehabhramana, nidrabhanga and matiksheena are very vague and are also seen in many other neurological disorders other than Parkinson's disease. So it is very difficult to diagnose the Parkinson's disease very accurately only with these lakshanas.

## MATERIALS AND METHODS

### Source of Data:

- The patients of KAMPA VATA were selected randomly from O.P.D of SVPRAMC, BADAMI after fulfilling the inclusion and exclusion criteria irrespective of their sex, occupation and socio-economic status.

- The size of sample was 20. It is a simple random sampling technique clinical trial.

### **Inclusion criteria**

1. Patients with clinical signs & symptoms of Karpavata vis-à-vis Parkinsonism disease were selected.
2. Patients of either sex are selected.
3. Patients above 40

years of age. Exclusion criteria

1. Diffuse Lewy body disease
2. Jacobs disease
3. Striatonigral degeneration
4. Wilson's disease
5. Huntington's disease (chorea)
6. Alzheimer's disease

### **Posology:**

1 ratti (125mg) of Chaturbhuj Rasa for 30 days

### **Anupana:**

Triphala Kwatha followed by Rice with milk

### **Study duration**

Internal Administration of Chaturbhuj Rasa – 30 days

### **Assessment of results:**

The subjective and objective parameters of base line data to pre and post medication were compared for assessment of the results. All the results were analyzed statically for value using paired, 't' test.

### **Subjective parameter**

1. Chestasanga: slowness and poverty of movements.
2. Kampa (Resting tremor): at least in one limb.
3. Sthamba (Rigidity): In any group of muscles in extremities.
4. Avanamana (Postural changes): Which includes signs like Rombergism.
5. Vakvikruti: Ekshruti (monotony) and Kala (low) speech.

6. Gatisanga: Slowstepped&shortsteppedgaitwithproplulsion &retropulsions.

**Objectiveparameters:**

1. Tremors
2. Rigidity
3. Bradykinesia
4. Gait
5. Dressing
6. Postural

stability**GRADINGFORVARI**

**ABLESKampa( Tremor)Score**

Bilateralviolentremoralongwithtremorintongueand/orineyelidslipsandnotsuppressedordi  
minished bywilledmovement. Grade -3-

Bilateraltremor Grade-2-

Unilateralslighttremorpresentatrestdecreasedbyaction,increasesbyemotionandstress  
Grade-1-

Notremor Grade-0-

**Gatisanga:-**

Unabletoraisefrombedandwalkwithoutassistance Grade-3-

Can walk slowly but need substantially help, shuffling with retropulsion/ propulsion  
lackof associated movement Grade -2-

CanwalkwithoutassistanceslowlybutwithshufflinggaitGrade-1-

Canwalkbriskwithoutaid Grade-0-

**Vakvikriti:-**

Incomprehensivewords,monotonousvoice,echoing,speaksonlyoninsistenceof  
examiner Grade-3-

Monotonousvoice,spiltconsonancebutunderstandablespeaksfeelswithexaminer  
Grade-2-

Variabletoneof voice. Grade-1-

Normalspeech Grade-0-

**Stambha(rigidity)**



Marked rigidity in major joints of limbs, patients maintain abnormal sitting postures, stare eyes

Grade -3-

Rigidity demonstrable on one of major joints

Grade -2-

Cog-wheel rigidity feebly present and on continuous examination vanishes Grade -1-

No rigidity

Grade -0-

### **Avanamna**

Complete bend down of body

Grade 3

Head bent forward with legs bent at knees

Grade 2

Only arm bent at elbows

Grade 1

No bending or flexion

Grade 0

### **Chestasanga**

Unable to carry routine activities of daily life

Grade 3

Able to perform daily activities with moderate difficulties Grade

2 Able to perform daily activities with less difficulties

Grade 1

No difficulties in carrying out activities

Grade 0

### **Tremors**

Gr 0 – Absent

Gr 1 -

Slight and infrequent Gr 2 –

moderate

Gr 3 – Marked

Gr 4 - Marked with all activities

### **Rigidity**

Gr 0 – Absent

Gr 1 -

Slight and infrequent Gr 2 –

moderate

Gr 3 - Severe, interferes with

manyactivitiesGr4-Markedwithallactivities

## **Bradykinesia**

Gr0-None

Gr1-Minimalslowness

Gr2—Mild slowness and poverty of movement

Gr3—

Moderate slowness poverty or small amplitude

**Gait** Marked slowness, poverty, or amplitude

Gr0—Normal

Gr1—Walks slowly, may shuffle with worst steps no propulsion

Gr2—Walks with difficulty or little assistance or no assistance

Gr3—Severe disturbance no assistance

Gr4—Cannot walk

### Dressing

Gr0—Normal

Gr1—Slow no help needed

Gr2—Occasional help with

buttons

Gr3—Considerable help required

Gr4—helpless

### Postural stability

Gr0—Normal

Gr1—Recovers unaided

Gr2—Would fall if not caught

Gr3—Falls spontaneously

Gr4—Unable to stand

### RESULTS:

PARAMETER	MEAN		MEAN	Paired t test		Improve %	
				BT-AT	T-value	P-value	Remarks
Kampa	BT	1.3	0.90	9	<0.01	HS	69.23
	AT	0.4					
Gati sanga	BT	1.1	0.65	5.9	<0.01	HS	59.09
	AT	0.45					
Vakvikruti	BT	1.45	0.45	3.94	<0.01	HS	31.03
	AT	1					
Stambha	BT	1.15	0.85	6.47	<0.01	HS	73.9

	AT	0.3					
<b>Avanamana</b>	BT	0.45	0.05	1	>0.05	NS	11.11

	AT	0.4						
Chesta sanga	BT	1.5	0.80	5.14	<0.01	HS	53.33	
	AT	0.7						
Tremors	BT	2.5	1.70	9.48	<0.01	HS	68	
	AT	0.8						
Rigidity	BT	1.7	1.20	6.43	<0.01	HS	70.58	
	AT	0.5						
Bradykinesia	BT	1.75	1	4.15	<0.01	HS	57.14	
	AT	0.75						
Gait	BT	1.2	0.5	3.68	<0.01	HS	41.66	
	AT	0.7						
Dressing	BT	1.3	0.65	4.95	<0.01	HS	50	
	AT	0.65						
Posturalstability	BT	0.65	0.15	1.83	>0.05	NS	23.07	
	AT	0.5						
	AverageImprovement					50.67		

Based on the analysis the conclusion can be drawn as, the treatment is more highly significant in the parameters, Kampa, Gatisanga, Stamba, Chestasanga, Tremors and Rigidity. In the parameters Stamba and Chestasanga have same effects with positive correlation between before and after treatment. In the parameters Gait, Vakvikruti and Bradykinesia treatment has less significant. In the parameters Avanamana and Postural stability treatment not significant even though positive correlation before and after treatment. This may be because of the involvement of whole vertebral column which cannot be corrected with medical management.

## **DISCUSSION:**

According to Ayurveda, Kampavata is a Vata Nanatmaja vikara. During the period of Charaka and Sushruta clinical manifestations of kampavata like kampa, stambha, chestasanga, vakvikruti etc was not explained as one disease instead explained under various contexts majority of the symptoms of kampavata were found in kaphavrita udana and kaphavrita vyana but no single avarana process completely cover the symptoms of kampavata.

It is therefore suggested that in view of classical reference, a complete clinical entity having symptoms, signs etc. the term Kampavata the most appropriate term, for the first time explained by Basavarajiyam with clinical features similar to that of Parkinson's disease.

**Probable mode of action:** Chaturbhuja Rasa is having the ingredients like Suvarna Bhasma, Rasasindhura which by virtue of their Rasayana effect help in the mitigation of symptoms of Kampavata. Eranda is best Vata kapha hara and also it acts as nerve tonic because of its Veerya.

The disease Kampavata is a Swabhavaja Vyadhi associated with old age which is a Vata predominant period, which makes the disease Yapya (incurable). However, it was the success of the therapy that improvement was noticed in almost all the patients and none was deteriorated. Parkinson's disease is a chronic, progressive, incurable type of Vata disorder. Chaturbhujasabeing Rasayana act superior treatment for Vata disorder.

### **CONCLUSION:**

- The treatment is more highly significant in the parameters, Kampa, Gatisanga, Stamba, Chastasang, Tremors and Rigidity.
- Compared to other symptoms, moderate improvement was observed in Gait, Vakvikruti and Bradykinesia.
- The therapy had no effect on the Avanamana and Postural stability. But in large sample size its efficacy on this parameter can be established.
- Overall 50.67% mean improvement was observed on all the parameters.

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# CRITICAL STUDY OF BALADI TAILA ABHYANGA WITH SPECIAL REFERENCE TO GERIATRICS

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## Abstract

Geriatrics aims to promote health by preventing and treating diseases and disabilities in older adults. Increasing age is associated with several physiological changes and various illnesses like cardiovascular diseases, diabetes, osteoporosis and memory problems. Ayurveda classics believe that human body is meant to be shatayu (live for 100 years) provided one follows the right daily regimens (dinacharya) that include abhyanga. Application of oil to the skin followed by massage in specific directions is known as abhyanga. The therapeutic efficacy of abhyanga depends on the appropriate selection of oil according to disease, prakriti, the skill of therapist etc. Baladi taila has been indicated in kshina sharira (weak body), garbhini (pregnant female), sutika (postpartum female), raja yoga purisha (people with luxurious life style). Preparation of Baladi taila has been explained as per kalka siddha senhapaka vidhi. After preparation, the taila siddhi lakshna should be observed. As per sharangdhara, madhyapaka Sneh should be used for abhyanga. Method of taila preparation plays an important role in absorption and mechanism of action. Abhyanga with baladi taila prepared by classical method may be effective in preventing the process of ageing.

## Introduction Ayurvedic review

Geriatrics or jara chikitsa in Ayurveda is a method to control or slow down the process of ageing in the human being during degenerative phase in one's life. Ageing is essentially a physiological phenomenon which results because of the involuntary changes occurring in the body<sup>1</sup>.

In India, the life expectancy at birth has improved vastly over the last few decades, increasing from 36.2 years in 1950 to 67.5 years in 2015 and projected to rise to 75.9 years by 2050. Population shares of adults 60 and up, grew 20.3 million in 1950 to

more than 116 million today and study suggested that by 2050 more than 324 million individuals aged more than 60 and above. As India's population structure changes, so



does its health profile. This is especially true for noncommunicable diseases (NCDs). NCDs include cardiovascular diseases, cancers, chronic respiratory diseases, diabetes, and eyesight conditions, the prevalence of which all increase with age. While infectious, nutritional, maternal, and perinatal conditions have traditionally represented the greatest health threats in India. Mental illnesses and substance abuse disorders have also been increasing among older age groups: between 1990 and 2013, mental illness and substance abuse disorders rose from 2.8% to 4% of the total morbidity burden among adults 50–69 years of age.<sup>3</sup>

Ayurveda considers ageing as Swabhava ja Vyadhi, i.e. it is inherent in nature of living being to get old.<sup>4</sup> Jara is considered as one of the anga in Ashtang Ayurveda.<sup>5</sup> Acharya Shasha explained Jara or Vardhky in the classification of Ayu.

Classification of Vaya<sup>6,7</sup>

	<b>Balya</b>	<b>Madhya</b>	<b>Vrudha</b>
<b>Charaka</b>	Aparipakwadhātu Birth to 16 years	30 years to 60 years	100 years
	Paripakwadhātu 16 years to 30 years		
<b>Sushruta</b>	Kshiraad Birth to 1 year	Vrudhi 16 years – 20 years	Above 70 years
	Kshira and 1 year–2 years	Yovana 20 years – 30 years	
	Annad 2 years–16 years	Sampurna 30 years–40 years	
		Haani 40 years – 70 years	

### Sequential Kshaya in ageing<sup>8,9</sup>

Vagbhata and Sharangdhara presented an interesting scheme for the loss of different biological factors during the lifetime as a function of human being in different decades.

<b>Decades</b>	<b>Year</b>	<b>Vagbhata</b>	<b>Sharangdhara</b>
First	1-10	Balya	Balya
Second	11-20	Vrudhi	Vrudhi
Third	21-30	Prabha	Chavi

Fourth	31-40	Medha	Medha
Fifth	41-50	Twacha	Twacha
Sixth	51-60	Shukra	Drushti

Seven	61-70	Drushti	Shrukra
Eight	71-80	Shrotrendriya	Vikram
Nine	81-90	Manna	Bhuddhi
Ten	91-100	Sparsha indriya	Karmendriya

## Modern review<sup>10</sup>

Geriatrics is a branch of science which deals with care of old people. Ageing is a natural process which can be studied through various theories, biologic theory is one of them.

Biologic theory deals with the physiological changes occurring in the human body. It is subdivided into stochastic theory and non-stochastic theory.

Stochastic theory means ageing occurs randomly and non-stochastic means ageing is a certain predetermined time phenomenon.

Stochastic is further divided into

### Error theory-

error occurs in the transcription in any step of protein synthesis of DNA which causes reproduction of an enzyme or protein that is not an exact copy.

**Free radical theory**—free radicals are by-products of metabolism, which accumulate in the cell, damage the membrane decreasing its efficacy.

### Crosslinkage theory—

some proteins in the body become crosslinked thus, normal metabolic activities are affected.

### Wear and tear theory-

cells simply wear out over time because of continuous use. Non-stochastic theory is further divided into two theories

**Programmed theory**—cells can multiply a limited number of times

**Immunity theory**—decrease in the immune response, lower the rate of lymphocytes and its proliferation.

## Management of ageing in Ayurveda

Ayurveda has a holistic approach in ageing which reflects in Rasayana, Panchakarma, Yoga and dietary habits. Panchakarma is a radical approach designed to clean the microchannels of the body, thus enabling better nutritional status with rejuvenate activity. In geriatric care, selective panchakarma therapy like Abhyanga, Sarvang Dhara, Shirodhara, Brihana Basti, Matra Basti etc may be advised to counter degenerative process<sup>11</sup>.

### Abhyanga Etymology



The word abhyanga is derived from the “ang” dhatu, which denotes the meaning of motion and “abhi” upasarga. Thus, it means motion in different directions<sup>12</sup>.

### Definition:

Application of Sneha in some specific procedures is called abhyanga. It is practised commonly in our daily life. For this purpose, generally oil is used, though sarpi, etc

may be applied. In the process of abhyanga the body surface i.e. integument undergoes manual pressure by various techniques and various substances to provide not only relaxation of the body but also the pacification of various types of diseases. Abhyanga should be done daily as it has been explained in dincharya. Apart from sarvang sharira, abhyanga should be especially advised for shira, shravana and pada<sup>13</sup>. Abhyanga is marda vakara, kaphavata avrodhahara, dhatu pushtikara, balavarnakara<sup>14</sup>. Baladitaila has been indicated in kshina sharira (weak body), garbhini (pregnant female), sutika (postpartum female), rajayogya purisha<sup>15</sup> (people with luxurious lifestyle).

### AIM AND OBJECTIVE: -

To study the mechanism of action of baladitaila abhyanga in geriatrics.

### MATERIAL AND METHODS:-

Herbal drugs	Latin name	Quantity
Balamul	Sida cordifolia Linn	2Kg
Kulatha	Dolichos biflorus Linn	2kg
Yava	Hordeum vulgare Linn.	2kg
Koal	Ziziphus mauritiana	2kg
Til taila	Sesamum indicum Linn	1lit
Bilva	Aegle marmelo	200 gm
Agnimantha	Premna serratifolia	200gm
Gambhari	Gmelina arborea	200 gm
Shyonaka	Oroxylum indicum	200 gm
Patala	Stereospermum suaveolens	200gm

Brihati	Solanum indicum	200 gm
Shalaparni	Desmodium gangeticum	200 gm
Kantakari	Solanum xanthocarpum	200 gm
Gokshura	Tribulus terrestris	200 gm
Prishnaparni	Uraria picta	200gm

## Kaladravya

Herbal drugs	Latinname	Quantity
Shatavari	asparagusracemosus	250gm
Devdaru	Cedrusdeodara	250 gm
Manjistha	RubiacordifoliaLinn	250 gm
Kushta	Saussurealappa	250 gm
Shaileya	Parmeliapelata	250 gm
Tagar	Valerianawallichii	250 gm
Agaru	Aquilariaagallocha	250 gm
Saindhav	Rocksalt	250 gm
Vacha	Acoruscalamus	250 gm
Punarnava	Boerhaviadiffusa	250 gm
Jatamasi	Nordostachysjatamansi	250 gm
Sariva	Hemidesmusindicus	250 gm
Tejpan	Cinnamomumtamala	250 gm
Shatpushpa	AnethumsowaKurz	250 gm
Ashwagandha	WithaniaSomnifera	250 gm
Ela	ElettariaCardamomum	250 gm

## Materialfor Abhyanga:-

- Abhyangatable
- BaladiTaila
- Masser
- Towel
- Gasoven

## Properties of Baladi Taila Dravya17: -

## Kwathadravya:

Herbal drugs	Latin name	Rasa	Vipaka	Virya	Guna	Doshaghnta	Karya

Balamul	Sidacordi foliaLinn	Madhur	Madhur	Shee t	Guru,Sn igdh	Vata Pitta shamaka	Hrudya,Dor balyanashak ,Kshayaghn a
Kulatha	Dolichos biflorus Linn	Kashay	Katu	Ushna	Laghu	Kapha, VataShama ka	Ashmarighna
Yava	Hordeum vulgareL inn.	Madhura , Tikta,Ka shaya	Katu	Shee ta	Ruksha, Pichhala ,Mr̥idu, Anabhiṣy andi,Sar a	Kaphapittaha ra,Vatakara	Lekhana,Medo vatahara, Medhavardhak a,
Koal	Ziziphusm auritiana	Madhur, Amla	Amla	Sheet	Guru,Sn ighna	Vata Kaphaghna	Shrukral, Deepana
Tiltaila	Sesamum indicumL inn	Madhur	Madhur	Ushna	Guru,Sn ighna	Kapha , Vatashamak	Medhya, Deepana
Bilva	Aeglema rmelo	Kashay, Tikta	Katu	Ushna	Laghu, Ruksha	Kapha, Vatashamak a	Hrudya,Gar bhashaysho dhak,Aaksh epak
Agniman tha	Premnaser ratifolia	Katu,tik ta,Kash ay,Mad hur	Katu	Ushna	Ruksha, Laghu	Kapha Vatasaham ka	Shothaghna, Aamnashak
Gambha ri	Gmelina arborea	Tikta,K ashay, Madhur	Katu	Ushna	Guru	Tridoshghna	Medhya,  Shukral,Vi shaghna
Shyonak a	Oroxylum indicum	Madhur, Tikta,K ashay	Katu	Ushna	Laghu, Ruksha	Kapha, Vatashamak	Atrisara
Patala	Stereosper mumsuave olens	Tikta,K ashay	Katu	Ushna	Laghu, Ruksha	Tridoshaghna	Kasa, Shwasghna,

## Kalkadravya<sup>18</sup>:

Herbal drugs	Latinname	Rasa	Vipaka	Virya	Guna	Doshaghnta	Karya
Shatavari	Sida cordifolia Linn	Madhur	Madhur	Sheet	Guru, Snigdha	vatapittaghna	brihana, stanyajanana
Devdaru	Cedrus deodara	Tikta	Katu	Ushna	Laghu, Singdha	Vatashamak	Rakta shodhak, Hrudy a
Manjistha	Rubiacordifolia Linn	Tikta, Kashay, Madhur	Katu	Ushna	Guru, Ruksha	Kapha, Pittashamak	Vrana ropak, Krumighna
Kushta	Saussurea lappa	Tikta, Katu, Madhur	Katu	Ushna	Laghu, Ruksha, Tikshna	Kapha, Vatashamak	Akshepnashak, Shukra shodhak
Shaileya	Parmeliaplatylocha	Tikta, Kashay	Katu	Sheet	Laghu, Snigdha	Kapha, Pittashamak	Hrudya, Kandughna

Tagar	Valeriana wallichii	Tikta, Katu, Kashay	Katu	Ushna	Laghu, Snigdha	Kapha, Vatashamaka	Shwas, Kasaghna, Mutral
Agaru	Aquilaria agallocha	Katu, Tikta,	Katu	Ushna	Laghu, Ruksha, Tikshna	Kapha, Vata shamaka	Balya, Vajikar
Saindhav 19	rocksalt	lavana	madhura	anushna shetta	sukshma, ruksha	kaphahra	karshana
Vacha	Acorus calamus	Katu, Tikta	Katu	Ushna	Laghu, Tikshna	Kapha, Vatashamaka	Manodoshar, Vamak, Swedjanna
Punarnava	Boerhavia diffusa	Madhur, Tikta, Kashay	Madhur	Ushna	Laghu, Ruksha	Tridoshar	Shothaghna, Mutral
Jatamansi	Nordostachys jatamansi	Tikta, Kashay, Madhur	Katu	Sheet	Laghu, Sigdha	Tridoshar	Medhya, Vrusha,
Sariva	Hemidesmus indicus	Madhur, Tikta	Madhur	Sheet	Guru, Snigdha	Tridoshar	Garbhasthapak, Balya, Netrya
Tejpan	Cinnamomum tamala	Katu, Tikta, Madhu	Katu	Ushna	Laghu, Ruksha	Kaphavata shamaka, Pitta vardhak	Kasghna, Rajovridhikar
Shatpushpa	Anethum sowa Kurz	Katu, Tikta	Katu	Ushna	Laghu, Ruksha, Tikshna	Kapha, Vata shamaka	Hrudya, Shoothar

Ashwa gandha	WithaniaS omnifera	Katu, Tikta, Madhur	Madhur	Ushna	Laghu,S nigdha	Kapha, Vatasha maka	Grantinashak, Anidranashak
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Ela	ElettariaCarda momum	Katu,Madhur	Madhur	Sheet	Laghu, Ruksha	Tridoshar	Balya,Ksh ayghna
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### **Preparation of Baladi Taila<sup>20</sup>:**

For preparation of baladi taila instead of normal Jala, kwatha is used. Kwath dravyas are taken in a given quantity and 8 times amount of water is added in patra. Patra is then subjected to heat (mandagni) until half of water gets evaporated. After, swanga sheetakwatha gets separated. Refined kwatha once again subjected to heat again, at time it started to boil til taila and kala dravya added in kwatha and heated continuously till all the water content gets evaporated, the moisture in the kalka will also begin to evaporate; at this stage, it has to be stirred more often and carefully to ensure that the kalka does not stick to the bottom of the vessel. After getting cool down galanna procedure is carried and siddh abaladi taila is collected.

**Observation of Sidhha Taila Lakshana:** Agni pariksha and fenodgama lakshna should be observed after preparation.

Paka pariksha should be carried out as, different types of snehapaka have been indicated for different process. According to Acharya Charka and Vagbhata kharasnehapaka should be used for abhyanga<sup>21, 22</sup> and according to Acharya Sushruta and Shrangdhara Madhya Snehapaka<sup>23,24</sup> should be used for abhyanga.

### **Procedure of Abhyanga<sup>25</sup>**

To begin patient should be undressed to minimum clothes. Oil should be heated in a water bath to make it lukewarm.

**Selection of taila:** Taila must be selected on the basis of prakriti, satyma, dosha, dhatu, desha and roga of the patient.

### **Posture:**

Posture of the patient should be so that abhyanga can be done in the whole body in each and every part. Abhyanga, if to be applied over all the body, seven posture are to be considered. Out of seven position the sitting position and supine position repeated.

Sitting upright with knees extended: In this position oil is applied over face, head and upper extremities. Supine position: patient is made to lie on his back and in this position, oil is applied to chest, abdomen and the anterior aspect of thigh and legs. Face is best manipulated in this position.

**Left lateral position:** patient is made to lie in down on his left side. Right side of trunk, inner aspect of right arm and outer aspect of right leg are accessible in this position.

Right lateral position: patient is made to lie on his right side of the body left side of the trunk, in respect of left arm and lateral aspect of left leg is easily smeared with oil in this position. Prone position: patient is made to lie on his abdomen. The buttocks and posterior aspect of legs are easily treated with oil in this position.

### **Direction of Abhyanga<sup>26</sup>:**

The direction of abhyanga should be anulomana i. e. in the direction of hair follicle. In case of muscle fibre, the direction should be from origin to insertion. For spinal massage, direction towards coccyx should be anulomana, though in specific condition its opposite direction is also granted. A circular movement is carried out around umbilicus. In upper and lower limbs, anulomana is to massage from upward to the tip of the fingers. Abhyanga on different joints should be done in circular direction.

### **Abhyanga kala<sup>27</sup>**

The sneha (oil) used in abhyanga reaches to the hair follicle in 65 sec (300 matra, one matra = 19/60 sec). It reaches to tvacha (skin), rakta (blood), mamasa (muscular system), meda (adipose tissue), asthi (skeletal system) and majja (marrow) in 400 matra (133 sec), 500 matra (160 sec), 600 matra (190 sec), 700 matra (228 sec), 800 matra (240 sec) and 900 matra (285 sec) respectively. So, for a particular part of the body, at least 3 minutes are needed to perform abhyanga. To cover all the body in seven postures at least 30 minutes are needed, though the time duration may be adjusted according to the need of the patients.

### **Virtues of Abhyanga<sup>28</sup>:**

- Jarahara (rejuvenates the body)
- Shramahara (delays aging)
- Vatahara (pacifies Vayu)
- Drishti prasada kara (provides better vision)
- Pushtyayu (promotes long life)
- Svapna kara (enhances good sleep)
- Sutvakadardhyakrit (enhances wrinkle free soft skin and strong body)
- Klesha sahata (increases tolerance power against exhaustion)
- Vyayama sahata (increases resistance against exertions)
- Abbhigata sahata (increases tolerance against any trauma)
- Kapha-Vata nirodhana (pacifies Kapha and Vata)
- Mrija varna bala prada (promotes fair complexion, good strength)

### **Contra-indication of Abhyanga<sup>29</sup>:**

- Kaphagrasta (persons suffering from Kapha diseases)
- Ajirni (persons suffering from indigestion)
- Kritasamshudha (who has undergone shodhan therapies)
- Amapidita (suffering from ama)
- Navjwara (acute fever)
- Niruha (who has undergone niruha therapy)
- Santarpano thyavyadhi (diseases produced due to nourishing therapy)

### **After procedure**

Patients should be subjected to swedana and to take bath with lukewarm water. Use of soap should be discouraged after abhyanga.

### **Precaution:**

Adequate precautions should be taken if the patient is suffering from any contagious disease.

### **Abhyanga is performed gently if the patient has any**

### **tender joint. Mechanism of action of Abhyanga:**

The mode of action of abhyanga can be understood by the properties of sneha dravya that are used for abhyanga. As sneha properties are opposite to vata and vata is responsible for all the physiological process. Among the properties of sneha chiefly snigdha and guru guna acts as a vatahara, snehana, balya, pushtikara; mridu guna reduces stiffness by its opposite quality of katha guna and sukshma guna helps in the penetration of drug into the minute channels. Acharya Dalhana has explained in detail about the absorption of sneha. If abhyanga is done for sufficient duration the sneha reaches to the dhatu and the potency of the drug used in sneha subsides the disease in the particular dhatu<sup>30</sup>.

The abhyanga is beneficial to skin, so one should practise it daily<sup>31</sup>. Acharya Charaka has explained that vayu dominates in sparshanendriya and its site is tvaka. Indriya are in close contact with mind and hence if indriya remains healthy, mind remains healthy. Thus, abhyanga keeps mind and body healthy<sup>32</sup>. Acharya Sushruta explains that, the

four Tiryaka Dhamni, divide gradually hundred and thousand times and thus become innumerable. These cover the body like a network and their openings are attached to romkopa. Through these only veerya of

abhyanga enter into the body after undergoing pachana by Bhrajaka pitta in skin and produces desired therapeutic action<sup>33</sup>

Skin is the gate way of the body through which abhyanga may act on different system of the body. The oil applied over skin penetrates into the epidermis through stratum corneum. It is transported to the systemic circulation via cutaneous circulation and lymphatics. Transdermal drug absorption depends on a variety of factors as follows:

1. Site of application
2. Thickness and integrity of the stratum corneum epidermis
3. Size of the molecule of drug
4. State of skin hydration
5. pH of the drug
6. Drug metabolism by skin flora
7. Lipid solubility

By the process of abhyanga the blood circulation increases at the site application. Venous return also increases by direct mechanical and reflux effect on blood vessel which in turn increases the ejection volume leading to effective circulation all over the body.

Abhyanga influences emotional status through touch mechanism which may be helpful in reducing primary hypertension. By means of abhyanga muscles are manipulated mechanically; as a result, micro vessels of that place are decongested and stagnated plasma of that place is reintroduced into the circulation. The efficacy of abhyanga can be enhanced by using some specific medicated oil<sup>34</sup>.

### **Discussion:**

Preparation of taila is important as mechanism of action depends on it. All siddhi taila lakshana should be present after preparation. Pak pariksha should be done, as different type Sneha paka are indicated for different procedures. The dravya used in the preparation should have potency so that active principles may remain in the extract. A well prepared Baladi taila can easily enter into the roomakupa and can show its desired effect. Most of dravyas used in baladi taila have ushna veerya which helps to pacify vata. The active principles in dravya may enhance the effectiveness of the abhyanga procedure.

In process of abhyanga the oil applied over skin reaches and stimulates the epidermis layer which contains lymphoid tissue, peridermotrophic T cells, keratinocytes and draining lymph nodes which often play an important role to maintain immune surveillance. The oil absorbed through the process of abhyanga may also lead to the movement of lymph which contains amino acids, glucose, fat, hormone, enzymes, salts

and lymphocytes from extra cellular space to main blood stream. This may result in regulation of hormones and enzymes. The antioxidant, free radical scavenging property of baladitaila may be helpful in reducing wear and tear of the cells.

Abhyanga with baladitaila may also help to remove toxins from the body as the toxins stored in the body also play a role in ageing. Baladitaila possesses anti-inflammatory and analgesic properties which may help in reducing the muscle fatigue and the joint pain in old age people. Baladitaila may show its action on mental degenerative disease like Parkinson's with the active principles present in main drug bala. Moreover, it may show the anti-stress effect with its properties.

### **Conclusions:**

Ageing is sahaj vyadhi i. e. intrinsic phenomenon, one of the phases of life. Ayurveda gives a ray of hope in geriatrics through various treatment modalities. Method of taila preparation plays an important role in absorption and mechanism of action. Observation of taila isidhi, lakshna and pakapariksha is important while preparation of taila. Abhyanga with baladi taila prepared by classical method may be effective in preventing the process of ageing.

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# **RasadravyaasRasayanainGeriatricCareandCureSwarnaas RasayanainGeriatricCareandCure**

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## **ABSTRACT:**

Background:Oxidativestresshasbeenalarmingly implicatedasamechanism of disease in cancer, in arteriosclerosis, aging and in other geriatric disorders like stroke.Hence search for safe and effective antioxidant and free radical scavenger agents, is the need of the hour. Swarna (Gold)is one such antioxidant drug used in Ayurveda for medicinal usage. Materials and Methods: This review comprises of comprehensive data on the research works that prove the rasayana activity of Swarna. Rasayana Activity has been proved in both Ayurveda and Modern perspectives in terms of free radical scavenging activity, Antioxidant, Anti angiogenesis properties. Results: Through various researches it is observed that Swarna Bhasma reduces the Oxidative stress which is involved in many geriatric diseases. Conclusion: Swarna Bhasma is considered as one of the best Rasayanain Geriatric care and cure.

**KEYWORDS:** Swarna,Rasayana, Rejuvenating,Immunomodulators, Geriatric

## **INTRODUCTION:**

Swarna has been considered as superior among all the metals and is included under Sara Loha group. The origin of Swarna is told from the Shiva Virya. It is being told that when Agnideva swallowed the Shiva Virya and spit it out, it got converted into Swarna<sup>1</sup>. Swarna is known by different names like Kalyana, Mangalya, Kanaka, Kanchana, Hiranya, Hema etc<sup>2</sup>. The use of Swarna started with Dehavada and Lohavada where either the body is made strong enough to achieve the salvation or to convert the lower metals into higher metals. Later when Chikitsa vada evolved Swarna was utilized for various ailments effectively. The conversion of Swarna in the most suitable form of the body was evolved during the period of Rasashastra only, where it is being told to convert it into Bhasma form, which is having property like Ayurvardhka, Prabha,

Dhismruthikara, Ajaraakaari, Viryavruddhikara, Vishagadhahara etc<sup>3</sup>. While in Rasatarangini we get reference of Swarnavarka/swarnapatala which is Akshhepakana shaka, Netrya, Hrudya, Amlapittahara etc. Even we find reference regarding Swarnalavana (gold chloride) said to be used as injection. It has Kashaya, Tikta and Madhura Rasa along with Snigdha, Sheeta, Pichchhila properties. It has Sheeta Veerya, Madhura Vipaka and pacifies the three Doshas. It has been considered Chakshushya, Sarvadoshaprashamana and Vishaghna. It is a potent anti-depressant, anti-anxiety, has free radical scavenging activity and analgesic properties. It is a cardiogenic, immunity booster, improves intelligence and memory. It is used in various disorders like Asthma, Rheumatoid Arthritis, skin ailments, Dementia, Parkinsonism and Infertility. It decreases stress induced raised levels of epinephrine, norepinephrine, 5-Hydroxytryptamine, dopamine and even corticosterones. It has been regarded as having Rasayana property in the classical texts like Ayurveda Prakasha, Rasa Tarangini and Rasamrita.

Oxidative stress has been alarmingly implicated as a mechanism of disease in cancer, in arteriosclerosis, aging and in other geriatric disorders like stroke. Hence search for safe and effective antioxidant and free radical scavenger agents, is the need of the hour. Swarna (Gold) is one such antioxidant drug used in Ayurveda for medicinal usage.

## **MATERIALS AND METHODS:**

In this review, information from the classical texts of Ayurveda like Rasaratnasamucchaya, Ayurveda Prakasha, Rasa Tarangini, Sharangdhara Samhita and Rasamrita was taken in consideration. Information related to oxidative stress, free radical scavenging and other activity of Swarna Bhasma was searched and compiled from various research articles.

## **GERIATRICS IN AYURVEDA<sup>4</sup>**

The term „Geriatrics“ gets its derivation from Greek words, „Geri“ meaning old age and „iatrics“ means care and is concerned with the care and health of elderly. It resembles to the Sanskrit word 'Geeryadi' meaning degenerated. In Ayurveda, Acharya Charaka considered old age above 60 years of age while Acharya Sushruta considers it above 70 years of age. Acharya Sushruta says that after 70 years of age, there occurs continuous Kshinta in Dhatus, Indriya, Bala–Viryā, Utsaah etc and also that elderly get prone to various diseases. However he also accepts that beginning of this Kshinta occurs after the age of 40 years only. According to Acharya Sharangdhara, loss of Medha also begins after fourth decade of life. Vata Dosha is the most important factor in the pathophysiology of ageing and related disorders because of its natural predominance at that stage of life. Acharya Sushruta has also accepted that in females Jara (old age) occurs at 50 years of age. It is due to this old age that menopause occurs. Ayurveda is the science of life and longevity. Therefore, Rasayana, one among Ayurveda's major eight

branches, is specifically devoted towards health, longevity, immunity and youthfulness even in older age.

Modern scientific observation "son Rasayana" shows that rejuvenating drugs can protect the body against detrimental effects of the atmosphere in which we survive, by augmenting the individual's capability to fight against disease by stimulating the immune system. According to Ayurveda one can be benefited with prolonged existence, memory, intellect, freedom from diseases, quality in luster, complexion and voice, optimal improvement of physique and all sense organs through Rasayana. Rasayana drugs act as potent antioxidants and neuroendocrine immunomodulators. Therefore this is an attempt to have an insight on the Rasayana activity of Swarna in geriatric care through Ayurveda and modern perspective.

Oxidative stress is involved in several age-related conditions (i.e., cardiovascular diseases [CVDs], chronic obstructive pulmonary disease, chronic kidney disease, neurodegenerative diseases, and cancer), including sarcopenia and frailty. Given the important role of oxidative stress in the pathogenesis of many clinical conditions and aging, antioxidant therapy could positively affect the natural history of several diseases.

## **RESULTS:**

### **Free-radical scavenging activity:**

A substance, such as an antioxidant, that helps protect cells from the damage caused by free radicals. Free radicals are unstable molecules that are made during normal cell metabolism (chemical changes that take place in a cell).

During planned experimental studies Swarna Bhasma has shown free radical scavenging activity. There are several proteins and enzymes present in our body that reduce the generation of reactive oxygen species ( $O_2^-$ ,  $OH^-$ ,  $H_2O_2$  etc.) Two such key enzymes viz. Superoxide dismutase (SOD) and catalase were measured after oxidative insult with acetic acid in both Swarna Bhasma treated as well as control animals serum and/or liver homogenate. Swarna Bhasma enhanced activity of SOD (267% in case of serum SOD and 75.8% in case of liver homogenate, SOD activity compared to the respective controls) and catalase (80% compared to control haemolysate) which can be correlated with the improved pathophysiological conditions of the patients<sup>5</sup>.

### **Antioxidant/restorative effects against global and focal models of ischemia**

Enzymatic parameters (lipid peroxidase, reduced glutathione, catalase, glutathione reductase, glutathione-S-transferase, glutathione peroxidase, superoxide dismutase, and glucose-6-phosphate dehydrogenase) were employed to assess ischaemic brain damage and its modulation. Significant restoration of altered values to near normal levels by Swarna Bhasma suggests potential for gold preparations in cerebrovascular diseases.<sup>6</sup>

## **Effect on Modulation of the Immune Response**

Gold salts used therapeutically can be followed by a decline in serum immunoglobulin levels, and rheumatoid factor titers in rheumatoid arthritis; in pemphigus there is similarly a drop in anti-epithelial antibody titers. Gold inhibits stimulation of immunoglobulin-secreting cells. Gold inhibits the activation of the classical and alternate complement pathways. Gold compounds inhibit numerous cell-mediated immune responses to various mitogens and antigens. Inhibition may be due to the effect of gold on macrophages acting as helper cell in these reactions. Auranofin is a new oral compound which seems to be particularly potent in its immuno-regulatory actions; it differs from other gold compounds in its pharmacokinetics, and in the nature of its ligand. Gold has also been reported to enhance certain immune reactions. The extent of the immuno-regulatory effects of gold in vivo is unknown, and the relation of these effects to its therapeutic actions remain to be clarified.<sup>7</sup>

In one such research to study effect of gold on immune response, separate concurrent injection of organic gold compounds and antigen into mice resulted in immuno-enhancement that could be measured by direct and indirect plaque-forming cells, rosette-forming cells, and serum antibody assays. Kinetics of the immune responses showed variable effects throughout day 9 of the experiment. Studies with British anti-lewisite, a gold antagonist, showed that the gold must stay in the system 1 day to obtain immuno-enhancement.<sup>8</sup>

## **Augmentation of Non-specific Immunity**

Male mice were administered with the incremental doses of the drug orally for 10 days. Parameters of study included body weight, organ weight, peritoneal exudate cell (PEC) counts and phagocytic activity of PEC. Swarna Bhasma significantly ( $P < 0.001$ ) increased counts of peritoneal macrophages and stimulated phagocytic index of macrophages.<sup>9</sup>

## **Effect on Antipermeability and Antiangiogenic Properties**

Despite the damaging effect on tissues at a high concentration, it has been gradually established that oxidative stress plays a positive role during angiogenesis. In adults, physiological or pathological angiogenesis is initiated by tissue demands for oxygen and nutrients, resulting in a hypoxia/reoxygenation cycle, which, in turn, promotes the formation of reactive oxygen species (ROS).

Gold nanoparticles have unique anti-angiogenic property. Gold nanoparticles inactivate heparin binding growth factors by interacting through the heparin binding domain. Gold nanoparticles decrease permeability and inhibit angiogenesis in vivo. Gold

nanoparticle is the first example of an inorganic compound that is anti-angiogenic in nature.<sup>10</sup>

Swarna is widely used in different dosage forms, which are used in both acute and

chronic diseases. There are pottalikalpas like Hemagarbhapottali, Ratnagarbhapottali, Lokeshwarpottali; parpatikalpas like Swarnaparpati; kupipakvarasayanalike Makaradhwaja, Swarnasindura, vatis like Sutashekhararasa, Rasarajarasa, Vasantakusumakararasa, Vasanthamalathirasa, Swasakasachinthanirasa, Swarna-Lakshmi vilasa rasa, Kumara kalyana rasa; arishtas like Saraswatharishta; avalehya like Kesarikalpa, Madanamodaka; rasayanas like Triphalarasayana, Aindri rasayana.

Toxicity of gold: Elemental gold is non-toxic and non-irritating when ingested but soluble gold salts such as gold chloride are toxic to the liver and kidneys. According to recent studies 13nm sized PEG coated AuNPs induced acute inflammation and apoptosis in the mouse liver. This shows that elemental gold does have some toxic effects but when it is converted into the bhasma form it proves to be non-toxic and safer for internal administration<sup>11</sup>.

## DISCUSSION

Oxidative stress has been alarmingly implicated as a mechanism of disease in cancer, in arteriosclerosis and aging. Much research indicates that generation of free radicals leading to oxidative stress plays an important role in the pathogenesis of ischaemic brain injury (Polidori et al. 1998). An imbalance between nutrients, and in particular those with antioxidant activity could explain the onset of an increased production of free radicals. Cellular damage produced by reactive oxygen species has emerged as a fundamental final common pathway of tissue injury in a wide variety of disparate disease processes. Free radical species of potential

Oxidative stress has been alarmingly implicated as a mechanism of disease in cancer, in arteriosclerosis and aging. Much research indicates that generation of free radicals leading to oxidative stress plays an important role in the pathogenesis of ischaemic brain injury (Polidori et al. 1998). An imbalance between nutrients, and in particular those with antioxidant activity could explain the onset of an increased production of free radicals. Cellular damage produced by reactive oxygen species has emerged as a fundamental final common pathway of tissue injury in a wide variety of disparate disease processes. Free radical species of potential

This is very true that application of Swarna Bhasma is time tested in Indian civilization with a praiseworthy therapeutic efficacy. Oxidative stress has been alarmingly implicated as a mechanism of disease in cancer, in arteriosclerosis and aging. An imbalance between nutrients, and in particular those with antioxidant activity could explain the onset of an increased production of free radicals. Cellular damage produced by reactive oxygen species has emerged as a fundamental final common pathway of

tissue injury in a wide variety of disparate disease processes. Aging is the progressive loss of tissue and organ function over time.<sup>12</sup> The free radical theory of aging, later termed as oxidative stress theory of aging, is based on the structural damage-based hypothesis that age-associated functional losses are due to the accumulation of oxidative damage to macromolecules (lipids, DNA, and proteins) by Reactive oxygen and nitrogen species (RONS).<sup>13</sup> The exact mechanism of oxidative stress-induced aging is still not clear, but probably increased RONS levels lead to cellular senescence, a physiological mechanism that stops cellular proliferation in response to damages that occur during replication. The Swarna Bhasma acts as free radical scavenger and thereby reduces the oxidative stress. This in turn helps the mechanisms like antiangiogenesis, anti-permeability, anti-depressant, anti-anxiety, immunomodulation and such other geriatric diseases.

Swarna Bhasma can prevent all diseases and has been included under Rakshopganaby Sushruta. By the virtue of its attributes like Madhura Rasa along with Snigdha, Sheeta, Pichchhila, Sheeta Veerya, Madhura Vipaka, Tridosahara, it acts as best Rasayana in Vardhakya Avastha and thereby help in maintenance of Dhatu Poshana and Samyata because in geriatric condition there is gradual depletion of the dhatu both quantitatively and qualitatively.

## **CONCLUSION**

A critical analysis of all available facts suggest very prominently that Swarna Bhasma is a wonder drug of Ayurveda which may be calibrated on parameters of contemporary science as researchers are adding new substantiated vision in case of Gold compounds all across globe in service of humanity. Swarna Bhasma can be considered as having Rasayana property which helps in Geriatric care and cure by acting as a free radical scavenger and reducing the oxidative stress which is involved in many old age related diseases.

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# CONCEPTUAL APPROACH TOWARDS VAYASTHAPANA IN RELATION WITH RASA AND BHAISHAJYA

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Aacharya Charaka has given unique importance to Vayasthapanam for maintaining vitality and managing ageing and its allied ill effects. Aacharya Dalhana gave 2 meanings of the word vayasthapanam. 1st is Vaya means young age and sthapanam means retaining it for long period & 2nd is retaining it for hundred years. As Vayasthapanam is mentioned in Charaka Samhita, conceptually this word will be more clear by knowing the Rasayana action of drugs included in Vayasthapanam Ahakashaya.

These herbal drugs are used for preparing the formulations of Rasa & Bhaishajya in the form of Rasayana kalpas. e.g. Abhaya is included in this Gana, Brahma Rasayanam of Abhayas Vayasthapak Kalpa. Aamalaki is famous Vayasthapak, Aamalaka Avaleha & Chyavanprashavaleha, Shatapaka Aamalaka Ghrita are Vayasthapak Kalpa. Other herbal drugs from Vayasthapanam like Punarnava, Sthira, Jeevantee, Mandukaparni are mentioned in Avaleha form as Vayasthapak & Rasayana kalpas in Charaka Samhita and other Rasagranthas. Bramhi is also used in Arishta form for Vayasthapanam. In relation with Rasashastra, Siddhamakardhwaj is Vayasthapak Kalpa in the form of Kupipakwa Rasayanakalpana, while Vasantakusumakar Ras, Trailokyachitamani Rasa and Laxmivilas Rasa are in the form of Kharaliya Kalpa. Modern research also covered a lot of pharmacological screening of most of these Rasayana and Vayasthapanam herbs. The possible mechanisms by which action of Vayasthapanam can be interpreted with modern aspects are as follows: Immuno-Modulatory Action - Prevents recurrent infection, expelling the damaged cells.

**Adaptogenic action** - Maintains the balance between mind and body. **Anti-aging Action** - Encourages the growth of new cells.

## **KEYWORDS**–

vayasthapanam, relation with Rasashastra, Kupipakwa Rasayana, Kharaliya Rasayanam, Avaleha Kalpana, Arishta Kalpana, Ghrita Kalpana of Vayasthapanam Dravyas

## **INTRODUCTION**

Vayasthapanam has an important role in Ayurveda as Jara-chikitsa being an integral part of Ashtanga-Ayurveda. Sharangadhara Samhita describes the sequential bio-loss occurring during different decades of life due to the process of Aging. (1) According to Acharya



Charaka, age has been divided into three parts, i.e. balyavastha (young age), madhyamavastha (middle age) and jirnavastha (old age). Retaining the young age for long period is Vayasthapan while Aging is defined as a progressive breakdown of homeostatic adaptive responses of the body. According to Ayurveda,

“Swabhava” (2) and “Parinama” “Kalasya parinama na Jaramrityu nimittajaha” (3) are considered as the responsible factors in the causation of Jara (Aging). According to Chakrapani onset of natural Aging process differs from person to person. The onset and progress of Aging depends on factors like Prakriti and Sarvadhatusarata which are genetically predetermined according to Ayurveda. In old age vatadosha is physiologically in a dominant state and Rasadidhatus (bodily tissues) are in a deficient state. This leads to degenerative changes and the process of decay in the body. Nowadays changing and faulty dietary habits, defective lifestyle, lack of exercise causes aging which starts at early age that is young age. Modern system of medicine has nothing much to recommend in geriatric care except the medical management of some diseases of the old age. According to Acharya Sushruta after seventy years of age one is called as old in whom the dhatus (body tissues). In old age, a person develops wrinkles on the skin, graying of hair, baldness with other complaints and decrease in working capacity. According to Acharya Vagbhata also mentions, aged person suffers from kasa (cough),

shvasa (dyspnea), valita (wrinkle), khalitya (alopecia), agnisada, shlathasara mansa sandhyasthita (looseness of muscles, joints and bone), twakapaurushya (skin becomes rough), avanama (body bends forward), vepathu (tremors), (5) etc. During childhood kaphadosha predominates, in the middle age pitta dosha and in the old age vatadosha is said to be dominant. The properties of vata dosha are described as ruksha, laghu, sheeta, khara and vishada. So Vata dosha by nature, decreases luster of skin, lessens body strength, dries and decays the body and fastens ageing process. In old age, more vitiation of vata dosha occurs which is responsible for vishamagni which affects the digestion and creating under nourishment of the tissues. This under nourishment of the tissues

creates diseases in elder people. As Vayasthapan a term is mentioned in Charaka Samhita, conceptually this word will be more clear by knowing the Rasayana action of drugs included in Vayasthapan mahakashaya. These herbal drugs are used for preparing the formulations of Rasa & Bhaishajya in the form of Rasayanakalpas. e.g. abhaya is included in this gana, Brahma Rasayan of Abhaya is Vayasthapak Kalpa. In relation with Rasashastra, Siddhamakardhwaj is Vayasthapak Kalpa in the form of Kupipakwa Rasayanakalpana, while Vasantakusumakar Ras, Trailokyachitamani Rasa and Laxmivilas Rasa are in the form of Kharaliyakalpa.

## AIM AND OBJECTIVES

1. To understand concept of Vayasthapan and aging.

2. To understand concept of vayasthapan mahakashaya as the word is introduced by Acharya Charaka.
3. To study kalpas of bhaishajyakalpana prepared mainly from dravya of vayasthapan gana as chief ingredient.
4. To study kalpas of rasashastra prepared from dravya of vayasthapan gana.
5. To study factors causing aging and rasayana used for vayasthapan.

## MATERIAL AND METHODS

### 1. CONCEPT OF VAYASTHAPANA AND AGING.

According to Acharya Charaka, age has been divided in three parts, i.e. balyavastha (young age), madhyamavastha (middle age) and jirnavastha (old age). Retaining the young age for long period is Vayasthapan while Aging is defined as a progressive breakdown of homeostatic adaptive responses of the body.

### 2. CONCEPT OF VAYASTHAPANA MAHAKASHAYA AS THE WORD IS INTRODUCED BY ACHARYA CHARAKA

Acharya Charaka described vayasthapan gana which, is having power of rejuvenation. This gana contains drugs which have Rasayana properties that help to inhibit tissue degeneration and stop progress of disease. The drug, which sustains the youth stage and prevents the aging process, is called as vayasthapak. According to Sushruta, Rasayana is vayasthapak (maintaining youth), provide longevity, immunity against diseases and improves mental and intellectual competence. According to Chakrapani, the drug that stabilizes the effective youth of the body is known as vayasthapanaka.

### 3. TABLE NO. 1 SHOWS KALPAS OF BHAISHAJYAKALPANA PREPARED MAINLY FROM DRAVYA OF VAYASTHAPANA GANA AS CHIEF INGREDIENT AND KALPAS OF RASASHASTRA PREPARED FROM DRAVYA OF VAYASTHAPANAGANA

HERBS INCLUDED IN VAYASTHAPANA MAHAKASHAYA (ch.sutra.)	VAYASTHAPANA ACTION OF KALPAS BELONGING TO BHAISHAJYAKALPANA (cha.Chi.)	VAYASTHAPANA ACTION OF KALPAS BELONGING TO RASASHASTRA (bhai.ratn.)
Haritaki	Brahmarasayana	Purnachandraras
	Abhaya rasayana Triphalarasayana	Shivagutika Nilakanthrasa-2
Aamalaki	Chyavaprashaavaleha Shatapak Aamalakghrut Aamalakavaleha	Shivagutika Nilakanthrasa-2

	Dhatri rasayana	
Amruta	Amrutarasayana	-
Jeevantee	Jeevanteerasayana Aamalakghrut	Nilakanthrasa-3
Shatavari	Atirasa (shatavari) rasayanasaraswararishta Aamalakghrut	ShivagutikaNilakanthrasa-2
Punarnava	Punarnavarasayana	-
Sthira	Sthirarasayana	
Mandukaparni	Mandookaparni-rasayana	Shivagutika, Nilakanthrasa - 2
rasna	Rasna-erandamooladi basti	-
aparajita	Shwetarasayana	-

#### 4. FACTORS CAUSING AGING AND RASAYANA USED FOR VAYASTHAPAN.

Sedentary life style, faulty food habits, lack of exercise causes early aging and leads to diseases like diabetes, hypertension, hyper and hypothyroidism, asthma at young age, PCOD etc. In these cases, Vayasthapan is necessary.

Table no. 2 shows the diseases caused due to early aging and Kalpas used for Vayasthana

Sr no.	Diseases caused due to early aging	Kalpas used as Vayasthapak	Words used in Phalashruti
1	Diabetes mellitus	Nagabhasma 2) Gandhakrasayana	1) Aayushya, kirtivardhana (rasa ratnakar) veerya vrudhi, drudhadeha (b.r.)
2	Hypertension	Pravalapishiti	Kantikar, veeryakara (ayurved prakash)
3	Cancer	Hirakbhasma	Ooj vardhak, hrudya
4	PCOD	Swarnamalinivasanta	Sarvaroge (Jeerna jwar-affects hridaya-rasadhātu-upadhau raja dushtee- swarnmalini vasant-jwaraghna)
5	Hyperthyroidism	Vasant kusumakar	Sarvaroge
6	Hypothyroidism	mahalaxmivilas+ kanchanarguggul	Taarunya laxmi pratibodhanay (y.r)
7	Loss of libido-masturbation	Purnachandrodaya rasa	Abhyasatmrutyujayanti, jara nashanam

8	Asthamaat young age	Abhrakbhasma	Tarunya vardhak (ayurvedPrakash)
9	Depression	unmadagajakesari	Hantihathatgadam (y.r.)

## DISCUSSIONANDCONCLUSION

According to Ayurveda swabhava and kala are responsible for the Aging. In old age vatadosha is physiologically in a dominant state and rasadi dhatus are in a deficient state. Ayurveda has great approach to delay Kala-jara (natural Aging) and to avoid Akala-jara (premature Aging).

Vayasthapana drugs. Rasayana is the measure by which one gets Rasa, Raktadi dhatus in its best condition, which establishes the age (Vayasthapana), increases the life span (Ayuskar), intelligence (Medha) and strength (Bala) as well as it enables the person to get rid of the diseases. Thus, it can be said that Ayurveda is helpful in delaying Aging process. In Ayurveda these drugs are grouped as Vayasthapana Drugs. The various types of Rasayana drugs are made from these plants are useful for specific as well as general use of it. Aging can be seen in many forms like loss of libido, depression, PCOD and can be treated with ras and bhaishajya kalpas by their vayasthapana property. Experimental studies done on various Rasayan drugs prove that they have immunestimulant, antioxidant, and anti-stress properties (6)

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# **Dashmoolarishtayuktaniruhabastiandit'suseingeriatrics-Areview**

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## **Abstract:**

Geriatrics is a medical practice that addresses the complex needs of older patients and emphasizes maintaining functional independence even in presence of chronic disease. Treatment of geriatric patient requires a different strategy and it's very complex. Ayurved a medicines aims to promote health by preventing and treating diseases and disabilities in its own manner. Panchakarma is a fast-acting treatment mostly use to eliminate dosha from nearest root and to give better and long-lasting results. Basti is considered as major treatment for vata and helpful in angni wardhana. In old age patients vata is a dominant factor for many diseases and for angni dushti. Dashmoolarishta is helpful in angni sandhukshan, tridosha shamana. Dashmoolarishta is rich in phytochemicals which prevents many diseases. In the form of niruha basti it helps in many ailments to get absorbed easily.

**Keywords:** dashmoolarishta, niruha basti, phytochemicals

## **Introduction:**

Aging is a complex and inevitable process that is associated with numerous chronically debilitating health effects. It is estimated that there are 50 million deaths worldwide. <sup>[1]</sup> it is evident that in both developing and developed countries of the world, nutrition-modifiable disease is potentially responsible for substantial portion of global deaths. Important areas of disease and disability in aging population in which nutrition may play a role in prevention are hypertension and stroke; cancer; reduced mobility accompanied by excess body weight with an increased risk of developing type 2 diabetes; Alzheimer's, incontinence, osteoporosis, arthritis; vision impairment and an increased risk of pulmonary problems and infectious diseases. <sup>[2]</sup> Basti is a therapeutic procedure in which the drugs administered into the anal canal by using „Basti“ i.e. urinary bladder of an animal stays in large intestine for certain period to nourish the body as well as to draw the waste products from all over the body into the colon and eliminate them out of the body by producing movements in the colon. <sup>[3]</sup> Dashmoolarishta is effective on grahini roga, aruchi, shwasa, kasa, gulma, bhagandara, vatavyadhi, kshayaroga, chardi, pandu, kamala, kushtha, arsha, prameha, mandagni, udaroga, sharkara, mutraroga, ashmari, mutrakric hira, on dhatukshaya, krisha purusha, on vandhyatwa and provides teja and

balatoshukradhatu<sup>[4]</sup> Using dashmoolarishtainniruhabastiprovides its absorption from

rectal canal and from colon. A large volume enema to inject liquid into the colon either to cleanse as much of the colon as possible or to deliver drug solution.[5]

### **Aim and objective:**

**Aim-** Dashmoolarishtayuktaniruhabasti and its use in geriatrics - A review

**Objectives:** To study the uses of dashmoolarisht in basti as prakshepa To study the role of basti in geriatrics

### **Materials and method:**

#### **Contents of dashmoolarishta:**

Dashmoola, giloy, lodhra, amla, atasi, khadir, vijaysara, haritaki, bibhitaka, deodaru, vidanga, yashtimadhu, bharangi, punarnava, chavya, jatamansi, priyangu, sariva, jeeraka, nishotha, rasna, pugaphala, kachura, haridra, padmaka, nagakesara, indrajav, karkatsringa, jivaniyagana, Chandana, nagakesara, ela, pippali, guda, munakka.

### **Niruhabasti**

Srno	Basti ghatakdravya	Pramana
1	Saindhava	1 karsha
2	Madhu	2 prasruta
3	Sneha	3 prasruta
4	Kalka	1 prasruta
5	Kwatha	4 prasruta
6	Prakshepa	2 prasruta

### **Methodology:**

Dashmoolarishta can be used as prakshepa in preparation of niruha basti. Charaka has emphasized that amla dravya can be used as prakshepa in niruha basti according to patient's bala, agni and koshta.

### **Discussion:**

#### **Mode of action of basti**

A drug that is administered rectally will in general have faster onset, higher bioavailability, shorter peak and shorter duration than oral administration. The given Basti enters the pakvashaya, decimate Vata dosha, which is the chief of all the diseases. The virya of the Basti drugs administered reaches all over the body through srotasa. It draws the morbid doshas lodged in the entire body from foot to the head with mala. The virya of Basti acts all over the body by the action of apana and other vayus. First the virya of Basti drugs reaches the apana vayu and nourishes it; then it acts on samana vayu. After nourishing samana vayu, it nourishes vyan vayu; thereafter it acts on udana vayu and pranavayu and nourishes them. When all these five types of Vata get to their normal



states, they promote health because aggravation of all the dosha mainly depends on Vata and nothing is better than Basti for the management of aggravated Vata dosha. Acharya Charaka said that Basti dravya reaches up to the grahani. Grahani is the site of agni. Here it acts on samana vayu, which lies in the near seat of jatharagni. Samana vayu is the promotor of jatharagni.<sup>[6]</sup> Because of action of Basti dravya samana vayu attains its normal function and ignites the jatharagni. The important function of purisha is vayvagnidharana and avshtamabha. As mentioned earlier Basti drugs first acts on apana vayu. The Basti performs the function of apana anulomana and hence increases the jatharagni by enhancing the function of purisha i.e. vayvagnidharana. Thus, Basti has its effect over agni, which is said to be main cause of all diseases.<sup>[7]</sup>

### **Importance of dashmoolarishta as prakashepa:**

Geriatric diseases mainly comprise of dhatu kshaya. Dashmoolarishta possesses all the characteristics that helps in agni vrudhi, pachana, srotoshodhana, santarpana and vata shamana.<sup>[8]</sup> Using dashmoolarishta helps in dhatu vardhana, bala vrudhi. Thus, it can be used in various diseases such as diabetes, constipation, osteoporosis, muscular dystrophies, hypertension. It possesses antioxidant properties and rich in vit B and C. Dashmoolarishta contains plant polyphenols that has anti-ageing properties.<sup>[9]</sup>

### **Conclusion**

Among tridosha, Vata is chief dominating factor because all dhatus and doshas become functionless without vayu. Pakvashaya is the specific place of vayu and Basti specially acts on pakvashaya. Vata is most responsible to cause disease in shakha, koshtadir ogmargas. By expelling out vata, shleshama, Pitta, anila, mutra and accumulated doshas Basti cures almost all ailments, provides strength to the body and enriches shukra thus prolongs life. It may be given at any age. Basti not only cures Vata diseases but also an important measure to treat Pitta and shleshma vikaras, raktsamsargaja and sannipatika condition. Though Basti retains for fewer times, its veerya (potency) spreads all over the body through micro channels like water transportation in a tree. Basti by its own potency can expel doshas situated at kati, prishtha, koshtha etc. from the root causing no recurrence of the disease. Basti, if administered properly, nourishes body, enhances complexion, strength, life span and harmony of constitution. In old age vata is the most dominant factor in disease causing. And hence basti could be very useful in geriatric care and management. Dashmoolarishta could be very useful in many patients with degenerative diseases and along with niruha basti it could have vast results. Since, this is an attempt made to review the uses of dashmoolarishta and basti in geriatric care, more studies with a good sample size or pilot studies could be carried out in proper manner to look for the better results and possible side effects.

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# **RASAUSHADHISINGERIATRICS**

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## **INTRODUCTION**

Ayurveda gives top priority to geriatrics. The term geriatrics is derived from Greek word Geri-old age and iatrics—care. It is a branch of medicine concerned with the care and treatment of elderly. In today's busy and competitive life the psychological factors like fear, hunger, etc. and overwork are also carrying the manifestation of old age. Ageing is a process of physical, psychological and social change in multidimensional aspects. As the incidence of elderly people is rising in the population world over including India, it is now felt necessary to develop newer strategies for geriatric healthcare.

Rasaushadhis are known for smaller dosages and quick action. Concept of rasashastra was mainly for the purpose of loha vada, which gradually got importance in chikitsa and hence used for deha vada. For the purpose of chikitsa, Murchana of parada was done which is then administered in four different forms like Kharaliya rasayana, parpatirasyana, pottali rasayana and kupipakwa rasayana. Kharaliya rasayanas like ayaskriti, chandraprabha vati are used for the purpose of rasayana. Parpati rasayana like lohaparpati, rasa parpati, tamra parpati, Vijaya parpati are used in treating geriatric diseases. Kupipakwa rasayanas like makaradhwaja rasa, siddha makaradhwaja rasa, rasasindura, swarna vanga are used as rasayana. Thus all the murchita parada yogas are utilized as rasayana.

**AIM:** usage of kharaliya rasayana, parpatirasyana, kupipakwa rasayana in geriatrics

## **MATERIALS AND METHODS**

### **.KHARALIYARASAYANA**

It stands foremost in comparison with other three parpati, pottali, kupipakwa rasayana in terms of its popularity, therapeutic utility and ease of preparations. Synergistic and antagonistic activity is established in preparation. Bhavana dravya adds and augments therapeutic qualities.

## **AYASKRITI: 3 major references**

- ❖ Lauhadi rasayana : Tikshna ayasa patra is heated and dipped in triphala kwatha, gomutra, alkaline water of lavana, ingudi kshara and kimshuka kshara to red hot, then it is stricturated, mixed with honey and amalaka swaras to get in lehavat form. This mixture is poured into earthen pot which is smeared with ghrita and kept inside heap of yava for one year, collected after one year.

Dosage: ½ to 2 ratti in morning, Anupana – madhu and ghrita.

- ❖ Aushadha ayaskriti and maha ayaskriti : Thin sheets of tikshna patra smeared with panchalavana solution, heated to red hot and dipped in triphala kwatha, salasaradiganadravya Kashaya for 26 times later heated in fire of khadira, collected finely powdered in khalvayantra.

Dosage: 5 gunja – 1 masha (625mg-750mg), anupana: ghee and honey.

### **❖ Ayaskriti:**

**Ingredients:** Asana diganadravya : each 20 pala

Jala: 2 drona Gud

a: 200 pala

Madhu: ½ adhaka

vatsaka diganadravya : each 1 pala.

The coarse powder of asana digana dravya added with above mentioned quantity of water boiled, reduced to 1/4th, filtered and added with jaggery and after dissolution the liquid is filtered and poured in dhupita pot and remaining drugs madhu and vatsaka digana dravya are added stirred well and this pot is kept in heap of yava.

then thin sheets of tikshna loha heated red hot and dipped inside the pot. This process repeated until whole of liquid gets depleted in liquid media. The mouth of the pot sealed and kept undisturbed for a fortnight.

## **2. PARPATIRASAYANA**

Parpati formulations are unique, known for its distinct and uniform method of preparation. This is useful in all the disease conditions of childhood, adult age and old age.

- ❖ Lohaparpati :

**Ingredients:** Shuddha parada–1 part

Shuddha gandhaka – 1

part Lohabhasma– 1 part

Kajjali is prepared, added with loha bhasma triturated to homogeneous mixture, this mixture is used to prepare parpatias per classical method. And end product is triturated and stored in airtight container.

**Dosage :** 1 ratti ( 125 mg ) and 1 ratti is increased each day upto 1 week (7th day 875mg), anupana -hima/kwatha of dhanyaka/jeeraka

**Pathya:** Raktashaali

❖ **Tamraparpati:**

**Ingredients:** Shuddha parada–1 part

Shuddha gandhaka – 1

part Shuddha tamra: 1 part

Kajjali is prepared, added with above mentioned quantity of tamra bhasma triturated to homogeneous mixture, and it is used for preparation of parpati.

**Dosage:** 1-2 ratti along with honey.

### 3. KUPIPAKWARASAYANA

Kupipakwa rasyana have been known for their absolute potency and smaller dosage. Largely produced by pharmaceutical companies, have wider range of therapeutic utility.

❖ **Makaradhwajarasa:**

**Ingredients:** Shuddha parada –8 parts

Shuddha gandhaka–

16 parts Shuddha swarnapatra-

1 part.

**Dosage**– ½ to 1 ratti (62.5 mg to 125 mg) anupana –madhu or tambulapatra swarasa

❖ **Rasasindura:**

**Ingredients:**Shuddhaparada-1pala

Shuddhagandhaka-1pala

Bbhavana dravya:vatankuraswarasa.

Dosage: 1-2ratti, anupana—madhu, ghrita, butter

## **DISCUSSION**

Lauhadirasayana makes person live long with no fear of diseases. Old age and death are delayed. he gets gaja prana, vak siddhi, dheeman, yashaswi and ayu prakarsha takes place. With the same method gold and silver can also be processed. Aushadha ayaskriti and maha aushadha ayaskriti when taken for one course makes person live healthy for 100 years. With another course it increases lifespan by 100 years. By administering loharpatri a person attains 100 years healthy lifespan.

Tamra parpati is sarvarogha hara and

rasayana. Makaradhwaj increases medha, ayu, kanthi and kamas

hakti. Rasasindura is rasayana, vajikara, balavardhaka etc.

## **CONCLUSION:**

Parada/rasa when processed and judicious therapeutic uses slows down aging process (jara nasha), heals diseases ( rukh nasha ), mrityu nasha ( delays death). The act of imbibing definite therapeutic properties in shodhita mercury through various pharmaceutical procedures is known as murchana. The murchita parada yogas are utilized as rasayana.

# **RASADRAVYAASRASAYANAINGERIATRICS CAREANDCURE**

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## **ABSTRACT**

Rasasastra, the Ayurveda pharmaceuticals is a well-established branch of Ayurvedaservinghumanitywithitsuniqueheritageofdrugs derivedfrommetallic,mineral,marine and animal origin and is classified into various groups like maharasa, uparasa,saadharana rasa, dhathuvarga, ratnavarga, sudhavarga, vishopavisha varga etc. Theformulations in Rasasastra are broadly classified into chathurvidha rasakalpas likekhalweeya rasayanas, parpati kalpana, sindhoora kalpana and pottali kalpana. Concept ofrasayana is highly accepted among rasaushadhis as most of the single drug preparationsand combined preparations have rasayana property. Rasaushadhis have innate qualitieslike quick action, less dose, tastelessness, prolonged shelf life, better palatability whichhavehelpedthemto bepatientcompliant. Hence,rasadravyaasrasayanaingeriatriccareandcure is anarea ofimmensepossibilities which arelessaddressed.

Geriatrics is addressed in Ayurveda as Jarajanya vyadhi and Rasayana treatments inAyurveda are primarily aimed at the diseases due to old age or jarajanya vyadhi. Rasadrugs are rich in antioxidants which removes free radicals from the body, rejuvenatesbody and mind thereby revitalizing function dynamics of body system. By virtue ofrasayana and therapeutic properties of rasaushadhis preventive measures and healthyageing can be successfully managed with rasaushadhis. Rasayana therapy helps toreulatemetabolism,providesphysicalandmentalstrength,improvesimmunesystem,and nourishes the whole body ultimately improving the quality of life among agedpersons. This article primarily aims to substantiate the possibility of Usage of Rasadravyaasrasayanaingeriatrics.

**Keywords:**Rasayana,rasadravya,rasaoushadhi,Geriatrics,ageing, immunity

## **INTRODUCTION**

Ayurveda regarded as the science of life has always focused on improving the quality oflife along with increasing the longevity and eradication of diseases. Going through theAyurvedic classics it is evident that diseases and treatment pertaining to every stage oflife is dealt with in detail throughout Ayurveda. The drugs used for the treatment of



all diseases primarily has three sources amongst which metallic and mineral sources has led

to the development of the science of Rasa Shastra in the earlier 10th century. The science of Rasa Shastra considered to be the pharmaceutical branch of Ayurveda includes drugs of mineral, metallic or herbo-mineral origin and their varieties, properties, purificatory methods, formulations, and their applications in treatment aspect.

Ageing is an inevitable multifactorial process that occurs physiologically witnessing the ageing of a single celled into a fully grown organism starting at the moment of conception continuing until the cellular death. Ageing is a prime and important physiological process that is essential for the growth and development of an organism. Even though the process of ageing is the same in all the species, the rate of growth or ageing or the physiological and pathological changes that occurs with ageing always differs from species to species and depends on various factors like the genetic setup of the species, environmental factors and lifestyle. True ageing is always considered as the result or consequence of the interaction between intrinsic factors (Genetic factors) and extrinsic factors (Environmental factors).

Ayurveda and modern science have expressed their own views when it comes to the categorization of human life into various stages starting from toddler to old age. Taking into consideration the average lifespan of an individual, span above 60 years of age has been categorized as old age. Old age witnesses a diminished health state of an individual following a gradual decrease in the rate of cellular growth and functions, and this makes old age prone to various health problems. Considering the recent statistics, globally there are more than 600 million people who are aged 60 years and above. It is estimated that this may increase up to 1.2 billion by 2025 and 2 billion by 2050. From the morbidity point of view, among Indian population almost 50% of elder citizens have morbid diseases and 5% of elderly population suffer from immobilization with compromised quality of life<sup>(1)</sup>

Geriatric care and treatment have gained its popularity and necessity in the modern era due to the inability of the elderly to have a healthy quality life because of compromised health and immunity status and also their inability to look after their own physical, physiological, and social needs. In modern science, geriatrics or geriatric medicine is considered as the sub discipline of Gerontology which basically focus on the health care of elderly people. The main aim and intention is to promote the health status by preventing and treating the diseases and disabilities along with reducing the suffering due to disability and minimalized dependence.

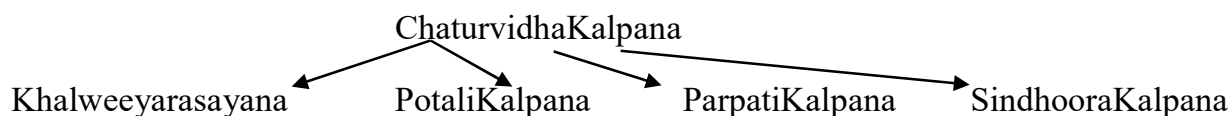
## **RASA SHASTRA AND RASAUSHADHI**

Rasa Shastra is a branch of Ayurveda that has evolved in the medieval period which mainly deals with the alchemical and pharmaceutical drugs and processes, poisonous herbalsubstances, their dosage, duration, indication and contraindication. Rasa us

hadhi

mainly include the drugs of mineral, metallic, herbo-mineral origin that are dealt with in the science and used in the manufacture of various formulations.<sup>(2)</sup>

Going through various textbooks on culture and civilization, it is evident that the origin of the application of metal and minerals can be seen since the start of human civilization in various stages of its progress and development. For example, Indus valley civilization have been said to use various metals and minerals like gold, silver, lead etc. for various objectives of the society. Even the proof of usage of metals and minerals as drugs can be seen from the Vedic era onwards. Rigveda in numerous contexts have mentioned its use for various medical purposes. Likewise references regarding the usage of drugs of mineral and metallic origin can be seen in various ancient literatures like Vedas, Puranas, and the Samhitas. The drugs can be seen used internally and externally depending upon the diseased condition. The science incorporates all drugs of metallic and mineral origin into various Vargas like Maharasa, Uparasa, Dhātuvara, Ratnavarga, Sudhavarḡa, Viśhopaviśha varḡa etc. The formulations consisting of the drugs belonging to any of the above said Vargas can be said as Rasaushadhi<sup>(3)</sup>. All the formulations used in Rasashastra can be included under Chaturvidha Rasakalpas namely Khalweeya Rasayana, Parpati Kalpana, Sindhoora Kalpana and Potali Kalpana. Single drug bhasmas are mainly used for the preparation of chaturvidha rasa kalpas. Pishti kalpana can be also incorporated in khalweeya rasayana.



According to Rasendra Sara Sangraha, Rasaushadhi are endowed with various qualities like quick action, minimal dosage, tastelessness, prolonged shelf life that makes rasa formulations highly patient compliant and are regarded as the drug of choice in case of Asadhyarogas<sup>(4)</sup>

## IMPORTANCE OF RASASHASTRA AND RASAUSHADHI

While considering the effectiveness of the drugs obtained from various sources, formulations containing drugs of metallic and mineral origin is considered more superior and fast acting than the drugs which are herbal in origin (kashtaushadhi). While looking at the pharmacological properties of the metallic and mineral origin drugs, it is evident that most of the drugs contain various antioxidants which help to remove the free radicals from the body that can cause fast absorption of the drugs into the system thereby rejuvenating the body. While observing the manufacturing process or purification processes of various metallic and mineral drugs which are basically available in the

crude form from nature, many of the drugs undergo various processes like Sodhana, Marana,

Nirvapana etc. that breaks down the complex structures into microfine particles which facilitates for the easy absorption and assimilation of the drugs<sup>(5)</sup>

## **GERONTOLOGY AND GERIATRICS**

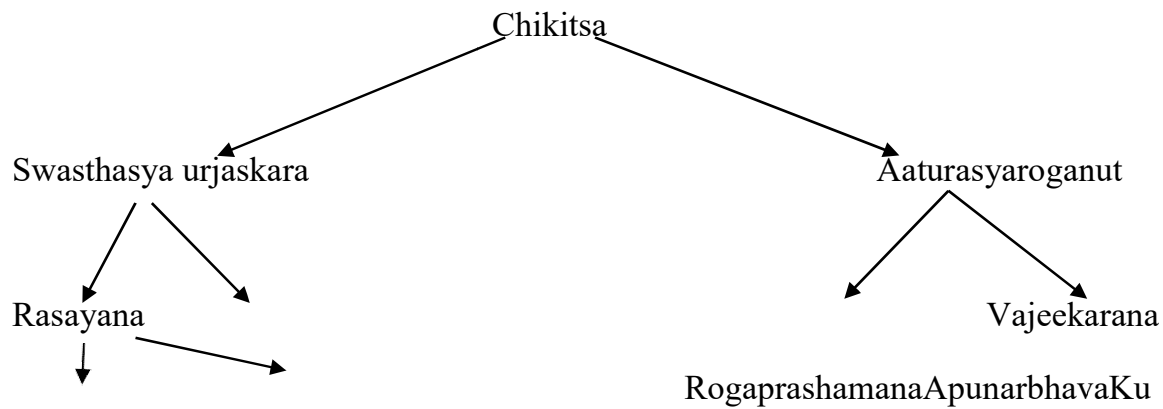
The term Gerontology is derived from the Greek terms “GERAS” and “LOGO” meaning old age and study respectively. Gerontology is the study of physical aspects of ageing as well as mental, social and societal implications of aging. Gerontology is a multidisciplinary branch which combines aspects from various fields like physiology, psychology, biological sciences, social sciences, public health etc. Geriatrics or geriatric medicine is a subdiscipline of gerontology which mainly focus on the medical aspect of ageing and healthcare. Even though geriatrics and gerontology are considered individually, the basic aim of both the sciences is to understand the process of ageing and provide maximum health care and support to maintain full function and achieve a quality life.

Ageing is a complex multifactorial physiological process witnessing the ageing of a single celled into a fully grown organism starting at the moment of conception continuing until the cellular death. Ageing is a prime and important physiological process that is essential for the growth and development of an organism.

In Ayurveda, various references are available throughout samhitas where acharyas have elaborated and classified age groups and the opinion differs from one to another. Acharya Susruta has mentioned the onset of vardhaka or old age after 70 years of age, while Acharya Charaka has mentioned the age of onset of vardhaka to be 60. (6,7). They also have mentioned the predominance of each of the tridoshas in each age group. Vata dosha is found predominant in old age. Diseases due to increased and vitiated Vata dosha is most commonly found in old age. According to Sharangadhara Samhita people entering the old age is generally afflicted with loss of virility, strength, cognitive power and locomotor ability along with gradual decline in the functions of dhatu, indriya, ojas and also bala and utsaha<sup>(8)</sup>

## **RASAYANA AND ITS UTILITY**

The concept of Rasayana chikitsa can initially be found in the classification of dravya according to prayoga as well as in the classification of chikitsa. Acharya Charaka has classified chikitsa based on its utility into two – Urjaskara chikitsa and Aturasyaroganut. Rasayana and Vajikarana comes under urjaskara chikitsa.

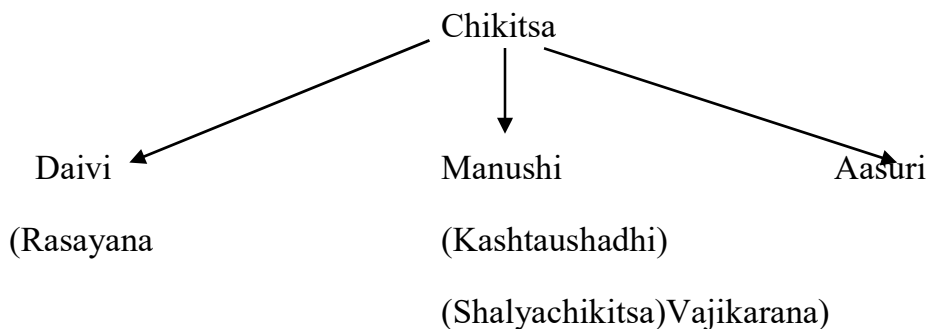


teepraveshika Vaatatapikarasayana

The term Rasayana is made up of two terms, „Rasa“ and „Ayana“. Rasa refers to saptadhatu and the term Ayana means pathway or road or way, summing up rasayanachikitsa in simple terms can be considered as a pathway to nourish the dhatus. Rasayanachikitsa primarily comes under preventive medicine even though the medicine formulations used as rasayana also possess power to modify and cure diseases.

Rasayana chikitsa has also been included under the Ashtangas or the eight branches of treatment according to Acharya Vagbhata. The Jara chikitsa mentioned in the Ashtangas basically refers to rasayana chikitsa. The term Jara chikitsa can be exclusively found

in the mentioning of Ashtangas and it mainly deals with treatment for conditions and diseases related to old age. In the context of trividha chikitsa also Acharya Charaka has included rasayanachikitsa under Daivi treatment.



Rasayana exerts its actions on the fundamental principles of the body like Agni, Dhatu and Srotas thereby enriching the nutritional value of the circulating plasma and promoting digestion and metabolism ultimately enhancing the microcirculation and tissue perfusion. (9) Rasayana ultimately aims at the qualitative and quantitative improvement of dhatus.

## RASASHASTRA AND RASAYANA

Rasaushadhi or the drugs used in Rasa Shastra basically are classified into

various groups-Rasa, dhatu, ratna, visha and sudhavarga. Each of these groups has specific and



unique actions. Among the classifications, rasa group is mainly attributed to have rasayana property.

Authenticative texts on Rasa Shastra including Rasa Tarangini, Rasa Ratna Samucchaya, Ayurveda Prakasha have enumerated in various contexts about drugs of mineral, metallic and herbo-mineral origin and their formulations that possess rasayana property (Table 1)

Table 1. Rasaushadha groups and individual drugs possessing rasayana property (10,11,12)

SINo:	Groups	Drugs included
1	Rasa	Parada
2	Maharasa	Abhraka, Vaikrantha, Makshika, Shilajatu, Sasyaka
3	Uparasa	Gandhaka, Haritala, Manashila, Nilanjana, Tutha,
4	Dhatu	Swarna, Rajatha, Loha, Vanga,
5	Ratna	Heeraka, Manikya
6	Uparatna	Suryavarta, Rajaavarta
7	Visha	Vatsanabha

Table 2. Common formulations of Chaturvidha Kalpana with rasayana property

SINo:	Chaturvidha Kalpana	Formulations
1	Khalweeya Rasayana	Kajjali, Arogyavardhinirasa, Chandraprabha vati, vasanthasukumara rasa, brihat Chintamanirasa, laghusutasekhararasa,
2	Parpati Kalpana	Rasaparpati, Panchamrita parpati, lohaparpati
3	Kupipakva rasayana	Rasasindoora, sidhamakaradhwaja
4	Pottalirasa yana	Hemagarbhapottali, Rasagarbhapottali, Abhagarbhapottali, Tamragarbha pottali, Mallagarbhapottali, Pravalagarbhapottali, ratnagarbhapottali

Organ system and disease specific indications and usage of compound formulations can be seen in various contexts across the Samhitas as well as the authoritative texts of Rasa Shastra (13).

- MedhyaRasayana–  
Swarnabhasma,AbhrakaBhasma,Rajathabhasma,Kantalohabhasma,Vajrabhasma
- HridyaRasayana –HridayarnavaRasa
- VrishyaRasayana – SwarnaBhasma
- Nityarasayana-Parada,Gandhaka,Swarna
- Lungs–PravalaBhasma,Pravala Pishti
- Kidneys– Vangeswara Rasa
- Diabetes-Silajatu, Vanga Bhasma
- SkinDiseases-Gandhaka,Arogyavardhini vatika.
- AutoImmuneDisorders-Chandraprabha Vati
- Kasa-MahalakshmivilasaRasa
- MemoryRelatedProblems -SmritisagaraRasa

Someguidelinesforrasoushadiesshouldbetaken careofduringgeriatricpractice. Multiple pathologies are seen in elderly people and hence treatment should be given according to the symptoms. Dosage fixation is the prime thing while prescribingrasoushadiestoelderlypeople. Whiletreatingstrothodushtilakshanaslikerasavaha strothodushti, raktavaha strothodushti pranavahasroto dushti, always target and take care oforgansrelatedwithsrotomoola.

**Table3CategorizationofRasadrugsaccordingtotheproperties**

<b>Table 3Categorization ofRasa drugsaccording tothe properties</b>	
<b>Deepana</b>	Abhraka,Haritala,Swarna,Mandoora
<b>Pachana</b>	Gandhaka,Hingula,Pravala,Varatika
<b>Rasayana</b>	Abhraka, Swarna Makshika, Vimala,Silajathu, Tutha, Gandhaka,Haritala,Manasila, Rasanjana, Neelanjana, Hingula,Swarna,Rajata,Kantaloha,Vanga, Manikya, Vajra, Rajavartha, Suryakantha,Bhallataka,Vatsanabha
<b>Ayushya</b>	Abhraka,Vaikrantha,Swarna,Rajatha, Tamra,Kantaloha,Vajra,Vaidurya
<b>Vishahara</b>	Swarna
<b>Sarvavyadhihara</b>	Abhraka,Vaikranta,SwarnaMakshika, Gandhaka, Hingula, Swarna, Rajatha,Kanthalo, Naga, Vajra

## RESEARCH STUDIES CONDUCTED

Coming into the research aspect of rasaushadhis, various studies have been conducted that proves the effect and action of rasaushadhi on immunity and bala (Table 3)

**Table 4; Studies conducted on Rasaushadhi and their pharmacological effect**

SLNO	Rasoushadhi used	Action
1.	Swarnabhasma	Immunomodulatory effect (15) Free radical scavenging activity (16)
2.	Swarna	Immuno enhancement effect (17)
3.	Swarna Makshika bhasma	Phagocytic activity (18)
4.	Muktabhasma	Immunomodulatory effect (19)
5.	Abhraka Bhasma	Immunomodulatory effect (20)

## DISCUSSION

When it comes to Rasayan property and its application in geriatric care, Rasaushadhi can be used effectively or substituted because of its ability to delay ageing process and improve longevity. The primary action is that it prevents diseases and promotes health. Rasayanachikitsa also helps to delay the ageing process, regulate digestion and metabolism and provide mental and physical strength. Almost all the drugs in Rasa Shastra have deepana, pachana, rasayana properties. In vardhaka avastha, vatadosha aggravates, pitta and kapha decrease, agni decreases, dhatukshaya, ojakshaya, balakshaya occurs. Hence rasa drugs with deepana, pachana, rasayana, ayushya, medhya, vishahara properties have physiological and psychological effects on elderly people.

### MECHANISM OF ACTION OF RASAYANA (14)

- Provides nutrition through the enhancement of nutritional quality of rasa dhatu
- Improves agni and also metabolism
- Increasing microcirculation through channels
- Causes effective elimination of mala and toxins from the body.
- Nourishes the saptadhatu and prevents chronic degenerative changes and illness

### MECHANISM OF ACTION OF RASAUSHADHI

- Antioxidant activity on the free radicals

- Antagonistic effect on oxidative stressors

## **CONCLUSION**

Rasayana is mentioned as a class of important drugs in the ayurvedic system of medicine primarily aimed to promote the physical, mental, social health of an individual along with improving the immune response and enhance longevity. Rasayana mainly

acts at three levels of the biological system to achieve the above said goals. Rasayana primarily acts on agni by interfering with the digestive process and promoting digestion and metabolism. Secondly, they act at the level of srotas by improving the microcirculation of the drugs and their ability to perforate into tissues and exerting their action. Rasayana finally acts at the level of rasa dhatu itself as a direct nutrient and nourishing the saptadhatu. Immunomodulation and antioxidant activity are two main activities exhibited by the rasayan drug that help to eradicate free radicals and maintain both specific and non-specific immunity. In geriatric medicine immunomodulation along with providing medical support is of prime importance. The study shows that various rasaushadhis can act as natural immunomodulatory and as a rasayan drug exerting their action on the tissue and cellular level and promoting longevity along with maintaining a quality standard of life.

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# RASAUSHADHISINGERIATRICS

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## **ABSTRACT**

In present era, not following dinacharya at particular age and time also sevana of apathya Ahara and vihar brings imbalance in Mahabhuta, Dosa, Dhatu, etc. thus ultimately leads to Vruddhata. It's a swabhavika avastha which we can't ignore. Ayurveda helps with managing the vruddhata or help stop prolong young healthy life.

Under the slogan of "Alpa matra prayogitvat" i.e. having effect at minute level with quick efficacy and minimal dose Rasaushadhi performs their main motto of Lohasiddhi i.e., transmutation of metals and Dehasiddhi i.e., retaining good health and virility as long as possible, using Paradadi rasa dravyas. In the initial days Rasaushadhis were prepared and consumed only for Rasayana effect. Rasaushadhi incorporates with Chaturvidha rasayanas- kharaliya, parpati, pottali and kupipakwarasayana. All have their unique presentation and preparation. On minute level, Bhasma preparations are ultimate Rasayana drugs, as Dhatu Bhasmas carry effect like- rasayana, medha vruddhi, vayasthapana, ruchikara, vrshya, vajikara etc. For Rasaushadhi's insight, in present article conceptual approach towards Rasaushadhi in Geriatrics been carried out.

**Keywords-** Ayurveda, Geriatrics, Rasadravyas, Rasayana, Rasashastra, Rasaushadhi

## **INTRODUCTION**

### **JARAIN Ayurveda & Rasashastra:**

Ayurveda being the most ancient Indian system of medicine which stand on the

basic fundamental principles, diagnostics, therapeutics, Materia medica which principally have herbo mineral origin. Ayurveda deals with JARA (Geriatrics) in very detailed manner. Ashtang Hridaya even mentioned JARA under 8 angas- Kaaya, Baala, Graha, Urdhwanga, Shalya, Damstra, JARA, Vrsha.

Ayurveda medicine has potential to prevent or to cope with old age problems including indigenous disease conditions like Sandhivata, Kasa-swasa, Prameha, Hridroga, Anidra along with others. Rasaushadis are considered as important part of Ayurveda



because of its Rasayan properties, faster action and longer shelf life which bring excellent therapeutic outcome. Here in this article, some formulations brought into light gain from classics in the circle of customarily proscribed drasaushadhis.

**Jara can broadly be classified into: -**

**Kalaja Jara**-Dhatu Kshaya janya Jara, At proper age (60 years)

**Akalaja jara**-premature ageing, Due to a pathya ahar vihar seva, or Margavarodh

**Geriatrics:**

Geriatric word meaning is - “an old person who is receiving special care” (Oxford dictionary). Usually > 65 is the age often used, but most people do not need geriatric expertise in their care until age 70, 75, or even 80. The number and proportion of people aged 60 years and older in the population is increasing. In 2019, the number of people aged 60 years and older was 1 billion. This number will increase to 1.4 billion by 2030 and 2.1 billion by 2050. (WHO)

Geriatric issues can be categorized as physical, psychological, emotional and social problems which may include- Cognitive decline, weakness, Oral health problems, vision or hearing loss, Cardiac disease, Osteoarthritis or osteoporosis, Respiratory diseases which can be supervised by Ayurveda s.r. torasaushadhis.

## MATERIAL & METHODOLOGY

There are innumerable yogas acknowledged by Rasatantrasara & each are kings in their own field of therapeutic effect. An effort was done to make garland of some of the scattered yogas which acts as Rasayana, Balya, Vajikara, Dhatu pushtikara, Vatahara, Sarvarogahara etc. which in turn cooperates to manage JARA. Rasashastra incorporates not only Rasa, but also Maharasa, Uparasa, Sadharana Rasa, Dhatu-upadhatu, Ratna-uparatna, Sudhavarigadruha, Visha-upavisha etcetera, alone or in combination as formulas.

Thus, yogas which enhance above mentioned qualities and work on digestive as well as respiratory system serve best for Jarajanya vikaras, some of them are-

## FORMULATION, ANUPANA & DURATION      ACTION      REF

FORMULATION	ANUPANA & DURATION	ACTION	REF
Triphalarasayan	Madhu & Sarpi For 1 year	Shata Varsha aayu without getting	BR73/5-6

		disease	
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Purnachandra rasa(Brihat)	Puttingvatika in betweenbet elleaves	Balya, Rasayana,Vrushya, Mandagni	BR73/78
SimhasyadiKwath	Mixwith Erantaila	Immidiatereliefin Grathrasi	BP BR26/68
Yogendrarasa	Triphala rasa,Sugar,V amshalochan a	Apasmara, Arsha,Weak senses,person becomesattractive like kamadeva	BR26/160
Anilarirasa	Castor oiltreated withsaindha v ortrikatu kashaya	All kinds of vatarogas	RSS BR26/171
Navagraharasa	In Vrihipraman aeith navaneeta	Samasta vatarogahara	RYS BR26/209
Gandhamritarasa	Madhu,sarpi	Jarahara	BR74/81
HemaSundara rasa	Milk, Ghritha,Dadhi keptin kamsyapatra	Jara Marananashanawi thin6 monthsof itsuse	BR74/76
Narasimhachurna	Milk	Jarahantiin1 month of regularuse	
Surasundari gudika	Regular for 1year	Vayastambhana	BR74/146
Dashamularista	-	Rasayana, Balya,Pushtikara, Dhatu&medhavar dhak, Dehadardhyakrit	BR74/357
Rasaraja	Milk,Sharkar atoya	Badhirya, Balya,Vrushya, Sarva vatavikarahara	BR26/204
Vayucchaya SurendraTailam	-	Kshina sukkra &artava (speciallyindicat ed forfemales), Apasmara,	BR26/265
Astavakrarasa	-	Medha, kanti, Balapushtikara, Valipalit vidhvansa	BR73/131
Amritarnavarasa	Kauruntakapa tra kwathawithG udafor	Rasayana, Jaranivarana	BR73/57

	4months		
Shatavarimodaka (Bruhat)	Lukewarm milk for 1month	Jara hanti, Balya,vatahara, oja-teja-ayu vardhana	BR74/208

Godhumadhyaghritam	Shali/milk/mamsarasa	Rasayana, Balya, Vatahara	BR74/277
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## **DISCUSSION**

Planning for a healthy future in your later years is as important as planning for your financial future. “Sheeryate iti shariram”- The term clearly states gradual degeneration of body. Thus, there is need to find a way which serves as pillar to old age for health as well as with minimum inconvenience. Rasaushadhis play that role satisfactory with minimum dosage and quick action. Rasaushadis have immense therapeutic applications, among them some are vayashtapaka, jaravairupyanashaka and curing age related diseases. During old age there is gradual decline of all the Dhatu, Veerya, Indriya, Ojas, Bala along with loss of hair, wrinkling of skin, chronic and recurrent cough, shortness of breath, inability to perform routine activities etc. Bhasmas incorporate nanoparticles which make easy and rapid absorption of medicine & helps in above mentioned conditions.

## **CONCLUSION**

Geriatrics, becoming an indispensable branch of current era which warrants Ayurveda, specially Rasashastra to nurse it. Rasaushadis are accounted with minimal dosage and swift action which diminish the problems or vyadhis of JARA avastha.

## **ABBREVIATIONS**

BR- Bhaishajya Ratnavali; RSS- Rasendra Sara Sangraha; RYS- Rasa Yoga Sagara; WHO- World Health Organization

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# POTENTIAL ROLE OF RASOUSHADHIS IN PREVENTION AND MANAGEMENT OF DIABETIC COMPLICATIONS IN GERIATRIC POPULATION: A REVIEW

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## **ABSTRACT**

Diabetes in the elderly is a growing public health burden. It has a significant impact on the health, quality of life and life expectancy of patients as well as on the health care system. Diabetes contributes to a significant amount of morbidity among geriatric age group. Hence there is need for prevention of diabetes-related morbidity issues to help the elderly to improve quality of life. Conventional system of medicine has nothing much to offer in the core area of prevention, except the medical management of the diseases. Ayurveda is essentially the science of life and longevity. Ayurvedic texts describe a large number of rasayana drugs to be used singly or as compounds in order to sustain healthy aging. Some Rasayana are also disease-specific as they induce specific immune and bio-strength to combat a particular disease. This paper attempts to emphasize the potential role of rasoushadhis in geriatric diabetic care. Rasadravyas such as Shilajatu, Abhraka, Makshika, Swarna, Rajata, Vanga, Naga and Yashada are clearly indicated with Rasayana and Pramehaghna properties. Among the several rasousadhis indicated with pramehaghna action, few formulations such as Shivagutika, Shilajatvadi Louha, Vasanthak usumakara rasa, Trivanga Bhasma, Chandraprabha vati, Punarnavadi Mandura etc. are established scientifically for their hypoglycemic, anti-hyperlipidemic, anti-inflammatory, immuno-modulatory and antioxidant effects. This encourages towards the utilization of rasoushadhis to prevent and manage the various health concerns related with the geriatric diabetic care.

**KEYWORDS:** Diabetes, Rasayana, Rasadravya, Rasoushadhi

## **INTRODUCTION**

Geriatrics is developing as a chief medical domain worldwide. The main issue in geriatric care is not merely the concern about the physiological phenomenon which is certain; rather it is also about the health problems specifically afflicting an individual in old age. Thus geriatric care has to address the dual concerns, firstly the delaying of physiological aging and secondly the prevention and management of diseases specifically occurring in elderly population.

Diabetes mellitus is one of the major endocrinological problems found in old age affecting millions of people all over the world. Diabetes mellitus has been recognized as a growing worldwide epidemic by WHO. The WHO has projected that diabetes will be one of the prime causes of mortality and morbidity with next quarter century. Diabetes mellitus has a significant impact on the health, quality of life and life expectancy of patients as well as on the health care system. It is the single most important metabolic disease that affects nearly every organ/system in the body. It is associated with significant complications, particularly damage or dysfunction of vital organs especially the kidneys, eyes, nerves, heart and blood vessels.

Conventional system of medicine has nothing much to deal in the core area of prevention, except the medical management of the diseases. Ayurveda is basically the science of life and longevity. Ayurveda laid emphasis on concept of aging, its prevention and management. Ayurvedic texts describe a large number of rasayana drugs of herbal, metallic and mineral origin to be used singly or as compound formulation. Rasayana drugs are likely to be nutrient tonics, antioxidants, anti-stress, adaptogenic and immuno-modulators. The net effect of all these attributes is the anti-aging effect. Some Rasayana are also disease-specific as they induce specific immune and bio-strength to combat a particular disease. Such Rasayana are called *naimittika rasayana*, like *Shilajatu* for diabetes mellitus. Ayurveda offers detailed understanding about the medical conditions related with diabetes, under the broad heading of *Prameha*. Ayurveda and *Rasashastra* texts elaborate wide number of drugs and formulations for the management of Diabetes. Many *prameha* hna drugs and formulations possess rasayana karma as well, due to which they might be significantly beneficial in prevention and management of diabetes induced complications. Hence this paper attempts to highlight the potential role of *rasaushadhis* in geriatric diabetic care.

## **MATERIALS AND METHODS**

Ayurvedic and *Rasashastra* literatures were studied in order to gather the information about *rasadravyas* or *rasaushadhis* with *prameha* hna, rasayana and other supporting therapeutic actions with special reference to diabetes and its complications. The information was extracted from various Ayurvedic treatises like *Charaka* and *Sushruta Samhita*; and classical texts of *Rasashastra* like *Rasa Ratna Samucchaya*, *Ayurveda Prakash*, *Rasa Tanrangini* etc. Information on experimental or preclinical studies of *rasadravyas* or *rasaushadhis* for their anti-diabetic actions were compiled from published research papers in various databases of research journals and search engines like *Google Scholar*, *Springer*, *Elsevier*, *Pubmed* and other relevant databases.

## OBSERVATIONS

In Charak samhita, shilajatu is described in detail in Rasayana prakarana of chikitsasthana. In Charaka chikitsa, Shilajatu is also indicated for various disease conditions like Sthoulya, Pandu, Udara, Shotha, Hrudroga etc<sup>1</sup>. Sushruta samhita mentions Shilajatu and Makshika as rasayana in Madhumeha chikitsa. Shilajatu is described as Naimittika Rasayana for Prameha<sup>2</sup>. In Ashtanga Samgraha, Shilajatu rasayana is mentioned in pratimar ameha chikitsa and detailed description of shilajatu is found in rasayana prakarana<sup>3</sup>.

### Rasayana and pharmacological attributes of rasadravyas

Rasadravya	Rasayana Karma/ pharmacological attributes	Reference
Abhraka	Tridosahara, Deepana, Rasayana, Amruta, Vrushyam, Ayushya, Balya, Netrya, Keshya, Varnya, Medya, Sakalagadahrut	RRS, AP, RT
Makshika	Tridosahara, Mehaghna, Basti rogahara, Rasayana, Vrushya, Chakshushya, Balya, Sakalamayaghna, Sarvarasayanagrya	RRS, R.Ch, AP, RT
Shilajatu	Tridosahara, Mehaghna, Medohara, Mootraroganashaka, Twakroganashaka, Rasayana, Jaravyadhiprashamana, Dehadaardyakara, Medhasmrutikara, Vayasthairyakara	Charaka Samhita, RT
Gandhaka	Rasayana, Deepana, Balya, Vrushya, Deerghaayushyakara, Drushtivardhaka, Netrya, Urdhajaturogaghna, Twakdosahara, Pramehaghna, Kushtaghna, Kandughna, Hrudrogahara	RRS, RT
Swarna	Ayurlakshmeeprabhasmrutikara, Akilavyadhividhwamsi, Soukhyadai, Pushtikara, Mehapahari, Medhya, Vrushya, Ojovardhaka, Dhaturvivardhaka, Balakara, Netrya, Hraddourbalyahara, Sarvadoshaamayaghna	RRS, R.Ch, RT
Rajata	Rasayana, Pramehamayaapaha, Mehaghna, Ayushya, Vayasthapana, Vrushya, Medhya, Hradya, Varnya, Balya, Sarvarogapaha	RRS, RT
Vanga	Sarvapramehapaha, Sarvamehapranashee, Medohara, Deepana, Pachana, Balya, Chakshushya, Ayushya, Vrushya, Rasayana, Mathiprada, Prabalendriyatwa, Dhatushoulayakara, Pushtikara	RRS, R.Ch, AP, RT
Naga	Deepana, Sarvapramehaghna, mehaghna, Ayushya, sarvavyadhinashana, mrutyunashana	RRS, AP, RT
Yashada	Mehaghna, Bahumeha nishoodana, Nishaswedani barhana, Chakshushya, Nayanaamayana shaka, Balaveeryaviveka samruddhikara,	AP, RT



RRS- Rasa Ratna Samucchaya<sup>4</sup>, AP – Ayurveda Prakasha<sup>5</sup>, RT- Rasa Tarangini<sup>6</sup>, R.Chi –  
RasendraChintamani<sup>7</sup>, R.Chu-RasendraChudamani<sup>8</sup>

Preclinical and experimental researches on rasasushadhis with special reference to diabetes and its complications

### **Rajatha Bhasma**

Rai et al<sup>9</sup> evaluated the Antidiabetic activity of Rajatha bhasma in streptozotocin-induced diabetic rats. After the treatment with Rajatha bhasma to streptozotocin-treated rats, it significantly lowered the blood glucose level. It also considerably decreased the elevated total cholesterol, triglycerides, and low-density lipoprotein level while increased the high-density lipoprotein.

### **Yashada (Jasad) Bhasma**

Sanjeevkumar Medli et al<sup>10</sup> investigated the anti-diabetic potential of Jasad bhasma against streptozotocin induced diabetes in rat. Diabetic rats treated with Jasad bhasma showed a significant antihyperglycemic effect with a reduction of serum glucose level. Bhasma was efficient in reducing serum triglycerides, cholesterol, low density lipoprotein and very low density lipoprotein to normal values and there was a marked rise in high density lipoprotein level as compared to diabetic control group. The study also evaluated and proved the positive benefit of Yashada bhasma on diabetic nephropathy and retinopathy.

Gnani Venkata Rajan et al<sup>11</sup> proved the positive results of local application of Yashada bhasma lepa in the management of dushta vrana w.s.r. diabetic ulcer. In this study, overall improvement on healing of the Diabetic ulcer was observed by the end of the treatment.

### **Shilajatvadi Lauha**

Singh TR et al<sup>12</sup> explored the antidiabetic potential of SLinnicotinamide streptozotocin induced diabetic rats. Shilajatvadi Lauha (10, 30, and 100 mg/kg) and glibenclamide (10 mg/kg) were orally administered once daily to diabetic rats for 14 days. Shilajatvadi Lauha significantly lowered the blood glucose without any hypoglycemic effect on their control counterparts, which was comparable to that of the standard antidiabetic drug, glibenclamide. It was observed that there were increased levels of plasma insulin and high density lipoproteins in diabetic rats treated with Shilajatvadi Lauha. There was significant reduction in total cholesterol, triglycerides, low density lipoproteins and very low density lipoproteins.

### **Chandraprabhavati**

M.M. Wanjar et al<sup>13</sup> studied the Antidiabetic activity of Chandraprabhavati in fifty five Wistar rats. Chandraprabhavati normalized the impaired glucose tolerance in oral

glucose tolerance test (OGTT) when compared to vehicle control. In alloxan-hyperglycemic rats, administration of Chandraprabhavati (200 mg/kg) significantly reduced plasma glucose along with reduction in cholesterol and triglycerides levels when compared to diabetic control group. The effects were comparable with metformin. This investigation suggested that Chandraprabha vati exhibits the anti-hyperglycemic effect and attenuates the glycation associated elevation in the lipid profile.

## **DISCUSSION**

Ayurveda treatises have explained in detail about the concept of aging, its prevention and management under the broad title of Rasayana. Many rasadravyas and rasoushadhis with rasayana property are mentioned in the manuscripts of Ayurveda and Rasashastra. The naimittika rasayana effect of shilajatu is explained in Samhitas and it is also known for ojavardhaka and Pramehagna property. Experimental studies showed that fulvic acid in Shilajatu diminished the development and progression of diabetes. Recent researches have also proven its anti-diabetic, anxiolytic, immunomodulatory, anti-inflammatory, antioxidant and free radical scavenging activities. Rasoushadhis namely Shilajatu, Shilajatu, Shilajatu, Shilajatu, Chandraprabhavati etc. which contain Shilajatu as a main ingredient exhibited anti-diabetic & anti-hyperlipidemic activities, also they found to be beneficial in Diabetic nephropathy. Abhraka is one among the most prominent rasayanadravya as elaborated in many texts of Rasashastra. Abhraka bhasma is indicated in many diseases related with different systems; hence its preventive and therapeutic benefits on multiple systems can be elicited. In an experimental study Abhraka bhasma treatment counteracted the action of carbon tetrachloride (CCL<sub>4</sub>) induced toxicity on liver and kidney. The vital organ protective action is much needed in geriatric diabetic patients. The Rasashastra texts have highlighted the therapeutic action of Swarna bhasma in improving the cognitive functions. This potentiates the benefit of Swarna bhasma in prevention of cognitive impairments that may occur in elderly diabetic patients due to psychological stress and trauma. In Rasa Tarangini, Swarna bhasma is illustrated to improve the blood circulation. As poor circulation is linked with diabetes, improving the blood circulation is essential to prevent macro-vascular, micro-vascular and cerebro-vascular complications. As per Rasashastra, three putilohas namely Vanga, Naga and Yashada are indicated in all types of Prameha. In texts of Rasashastra, Vanga has been professed to cure all types of Prameha like a sole lion can defeat a herd of elephants. The properties of Vanga as mentioned in texts like Meaghna, Medoghna, Chakshushya and Rasayana makes it a drug of choice in Prameha. Few researches have proven the anti-diabetic or hypoglycemic action of Vanga bhasma, Naga bhasma and Yashada bhasma; and also a compound formulation of all the three together i.e. Trivanga bhasma. As the role of Zinc supplementation for glycemic control is already established, anti-diabetic potential of Yashada Bhasma is quite relatable. Rasoushadhis not only have hypoglycemic

iceffect

but also correct metabolic derangements, help in maintaining the Agni and Ojas status, i.e., metabolic stability and immune strength in diabetic patients, and retard the complications of diabetes mellitus. Several rasoushadhis when tested for anti-diabetic effect, they also exhibited the anti-hyperglycemic effect which attenuates the glycation associated elevation in the lipid profile. These signify the preventive action of rasoushadhis on atherosclerosis linked with diabetes. Many rasadravyas are credited with Hrudya, Balya, Netrya, Vrushya, Ayushya, Vayasthapana, Rasayana etc attributes which suggest their protective function on multiple organs and systems. Hence there is definite scope for research on these drugs to appreciate their role in prevention and management of diabetes and its complications especially in geriatric population.

## **CONCLUSION**

As geriatric care necessitates maintenance and preservation of dhatu and ojus, there is need for Rasayana drugs to compensate the age related bio-losses in the body and to provide rejuvenating effect. Ayurveda and Rasashastra emphasized on Rasayana effect of various rasadravyas and rasoushadhis along with the disease specific therapeutic actions. The elaboration on the rasayana and other supportive actions like Netrya, Chakshushya, Balya, Medya, Hrudya, Dhaturvardhaka, Vayasthapana, Ayushya etc attributes strongly signifies the preventive benefit of these drugs especially on degeneration and disease induced complications. Rasayanarasadavyas and rasoushadhis used in routine Ayurvedic practice needs scientific justification to prove their role in prevention and management of diabetic complications. Such researches leads to better application of rasayanarasadavyas and rasoushadhis especially in geriatric diabetic care, thereby overall quality of life in geriatric population can be enhanced.

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# SHADANGARASAYANA(RASAUSHADHI)INGERIATRICDISORDER

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## **ABSTRACT:**

Ayurveda is world's most authoritative mind-body-spirit medicine system, Rasayan therapy is a unique therapeutic science to deal with ageing process and to reduce the intensity of problems according to this elderly phase of life. Rasayan therapy maintains the equilibrium of Rasadi Saptadhatu and optimum the power of body and sense to enhance intellect, memory, skin, luster, Complexion, bodily glow, generosity and preserve youthage. Management in elderly phase of life has two different areas. a) firstly for better mental healthy status of life and b) Secondly for the management of disease condition in elderly phase of life. There are 8 branches of Ayurveda and one of them is Jara. Rasashastra is a branch of Ayurveda which deals with Preparation of different formulations like herbal, mineral and herbo-mineral. Here attempt to describe One of the formulations named is Shadanga Rasayana which act as a Rasayan property in old age. Rasayan therapy is an answer in present Scenario to prevent premature ageing and to treat the manifestation due to ageing process.

**Keywords:** Rasaushadhi, geriatric, Shadanga Rasayana

## **INTRODUCTION:**

The term geriatric is derived from Greek word, Geri - old age and matris - care. It is a special division of medicine related to the preventive and curative measures of elderly. Ayurveda is basically the science of life and longevity. In ageing dhatus get

degenerated due to functional and structural modifications. It also ensures health lifespan including mental health and better resistance against various geriatric disease conditions. During old age, we cannot increase the capacity of Rasadi dhatus, but they can be preserved and rejuvenated. Rasaushadhis are being the backbone of Ayurveda due to its rasayana and therapeutic properties. Here is an attempt made to discuss shadanga rasayana property of rasaushadhis in geriatrics.



## MATERIAL AND METHODOLOGY 1:

S.NO.	INGREDIENTS	QUANTITY
1.	Kantalohabhasma	1Part
2.	Abharakabhasma	1Part
3.	Shilajitu	1Part
4.	SuddhaVatsanabha	1Part
5.	RAsaSindura	1Part
6.	SwarnaMakshika	1Part

## METHOD OF PREPARATION 1:

The most common method of preparation of Shadanga Rasayana is Kharaliya method of preparation. Clean Kharal should be taken. Fine powder of the all the drugs should be done separately. Now drugs are added together or one by one or according to the formula in kharal. All the ingredients are mixed homogeneously in the kharal. Then stored in airtight container with proper packing and labelling.

## NAME OF RASAYAN DOSE AND ANUPANA

NAME OF RASAYANA	DOSE	ANUPANA
Shadangarasayana <sup>1</sup>	125 – 375 mg	Ghrita, Madhu

## IMPORTANCE OF SHADANGA RASAYANA

- very quick action
- Small dose is required as compared to herbal dose.
- Easy to take, so patient's acceptability is more.
- Long shelf life as compared to herbal medicines.

## PROPERTIES OF RASADRAVYAS:

S.No.	Ingredient	Properties
1.	KantalohaBhasam <sup>4</sup>	Panduroghara, rajyakshmahara, vishahara, tridosahara, rasayana, balya, krimihara, ardha, grahanihara, agnimandiyahara, shothahara, pramehahara, gulmahara, kusthahara

2.	Abharakabhasma <sup>2</sup>	Snigdha,sitavirya,madhurraśa,ayushya,keshya, varnya,ruchikar,deepan,balya,netrya,medhya,
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		stanyavardhak
3.	Shilajitu	Madhura,tiktarasa,sitaguna,sitavirya,katu vipaka,chedana,vrushya,balya,lekhana,rasayana
4.	SuddhaVatsanabha <sup>6</sup>	Katu tikta kshaya rasa, ushna virya, yogvahi,rasayan, tridosahara mainly vatakaphahara,deepan, bruhman, balya, agnimandiyahara, pliharogahara, vataraktahara, shwasa hara, kasahara,kushthahara,panduhara,jwarahara,amava tahara, timirrogahara,vishaghna
5.	RasaSindoor <sup>3</sup>	Pramehahara, shula roghara, shothahara, bhagandararoghara, vrushya, sarvajwarahara, gulmaroghara,rajyakshmaroghara, kushtahara, vranahara, vatadoshahara
6.	SwarnaMakshika <sup>5</sup>	Vrushya, madhura rasa, rasayana, tikta,chakshushya, tridoshaghna, kshayahara, arshohara,pramehahara,vishaghna,pandushwathukus hthahara, jirnajwarahara,mandagnihara,aruchihara,yogwahi

## **DISCUSSION:**

TheRasayanatherapyhasprincipleaimstopromoterejuvenation,retardageingprocess, defend body from various diseases, regulate metabolism and providementalandphysicalstrength.Inthepresent scenario better techniques of drug analysis havecome upwhichcanhelpusinauthenticatingthe Rasayana and their effects on health.The branches of Ayurveda, RasaSastra and Rasayana getsstandardized,it will bring arevolutionin society.There is a need to generateawareness among the society about theconsequencesofpopulationageingandaboutthestrengthofAyurvedaingeriatrichealthcare.

## **CONCLUSION:**

The Rasaushadhi"s as Rasayana therapy helps to attain longevity, immunity, mentalcompetence, physicalstrength, sharpness of sense organs and qualities of Dhatus. Itnourishes whole body and improves immune system and hence natural resistance toinfection will be more. There are a large number of potent medicines in Rasa Shastrawhich are described as Rasayana. Undoubtedly, Rasaushadhis as Rasayana strength ofAyurvedainthecontextofGeriatriccare.

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# COSMETOLOGY IN GERIATRICS

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## ABSTRACT

In present era, person wants to give its hundred percent in every field of life whether in appearances or in work. Obsession with a youthful appearance and attractive looks has taken the most important place in modern society therefore resulted in an improvement in cosmetic procedures trying to reverse the aging process. Aging is a complex phenomenon, a sum total of changes that occur in living organism with passage of time. The most common visible signs of skin ageing are wrinkles and there are various therapies including antiaging cosmeceuticals, sunscreens, chemical and natural peeling and few surgical procedures have been used. Ayurveda, the traditional medicine describes aging in detail and the measure taken in *Ayurveda* for youthful skin and healthy life are taken even before the birth i.e. in foetal life.

Keywords: Appearance, Aging, Anti-aging, *Ayurveda*, Healthy life.

## INTRODUCTION

Ageing is a process of physical, psychological and social change in multi-dimensional aspects. The world's elderly population is increasing. By 2050, one fifth of the world will be older than 65 years. In India, they will be about 113 million seniors by 2016 [1,2]. Aging is one aspect which affect the physical appearance of a human being first. The complexion and texture of the skin reduces as age increases. The most signs of aging start from the skin. Skin becomes sagging, dryness, pigmented, wrinkles.

Cosmetology is the science of alteration of appearance and modification of beauty. Cosmetology derived by two Greek words

Kosmetikos + logia

Kosmetikos means “beautifying”

Logia means “application of beauty treatment”

Hence cosmetology means beautifying by the application of beauty treatment. Any procedure which we adapt to beautify one’s appearance in old age is cosmetology in geriatrics. In Ayurveda, there are lot of *Aahar*, *vihar* and *Aushad* which were mentioned to enhance external as well as internal beauty. But with increase in age these all are used for healthy life but for beauty, one of the best ways is cosmetology.

Geriatrics the term derived from two Greek word i.e.

Geron + iatrose

Geron means “old man”

Iatrose means “healer”<sup>3</sup>

There are three different terms which are compulsory to understand-

**Geriatrics or geriatric medicine** means the care of aged people.

Gerontology means study of aging process.

**Clinical Gerontology** means study of physical and psychological changes which are incidence to old age<sup>3</sup>.

## **AIMS AND OBJECTIVES**

The current study aims to find out the available aspects of cosmetology in geriatrics in *Ayurveda* as well as modern

## **MATERIALS AND METHODS**

In this study, material related to cosmetology and cosmeceuticals in unswerving available in scientific publications were screened by its therapeutic as well as nutritional values in geriatric disorders according to their preventive and curative aspects and also web-based information composed systematically. All data is compiled, analysed and discussed detailed which gives in depth understanding about cosmetology in Geriatrics.

**Common aging problems related to the cosmetology:**

1. Skin problem
2. Hair problems
3. Eye problem
4. Acne problem
5. Foot problem

### **Ayurveda as cosmeceutical:**

**Cosmeceuticals-** While the Federal Food, Drug, and Cosmetic Act (FD&C Act) does not recognize the term "cosmeceutical," but the cosmetic industry uses this word to refer to cosmetic products that have medicinal or drug like benefits.

In *Ayurveda*, many procedures explained which can be mentioned as cosmeceuticals such as

1. *Anjana* and *Ashchyotana*
2. *Moordhini taila*
3. *Varnya, Keshya* and *Vayasthapana Mahakashaya* described by *Acharya Charaka*.
4. *Alepana, Pariseka, Utsadana, Pandukarma, Roma sanjanana* etc. indicate the cosmetic approach in *Sushruta Samhita*. Elaborate description of '*Kshudra Roga* which are fundamentally related to Cosmetic science also support aesthetic sense of that period.
5. Various pulses and herbs are grinded with simple addition of milk, water or rose water to form a paste and apply this face pack for complexion and skin disorders.
6. Hair dye by using herbal drugs like *Bhringaraj, Ritha, Shikakai, Nilini, Amalaki* <sup>(4,5)</sup>.

### **Nutricosmetics:**

Nutricosmetics is the term often used for nutritional cosmetics. Hybrid between pharmaceuticals and cosmetic products that are intended to enhance both the health and beauty of the skin by external application. The following active ingredients helps the skin to retain its texture and appearance. A Natural way- with three-dimensional approach are:

Antioxidants, such as retinol, vitamin B, C and E, co enzyme Q10, alpha-lipoic acid (ALA), hyaluronic acid and polyphenols<sup>6</sup>.

Peptides, which stimulate collagen growth in the skin.

Natural botanical products such as green tea, Soyabean, Grape seed and *Aloe vera* etc

Plant extracts also find to be useful in nutricosmetic industry.

### **Best antiaging treatments:**

Some non-invasive anti-aging treatments are helpful to improve skin texture, rid from lines and wrinkles are –

- ❖ BOTOX
- ❖ CHEMICAL PEELS
- ❖ DERMAL FILLERS
- ❖ FACELIFT
- ❖ LASER PEEL AND SKIN REJUVENATION
- ❖ MICRODERM ABRASION



## **DISCUSSION AND CONCLUSION**

The concern with body care, image and physique is greatly related to the beauty in old age and is a great focus of attention to public.

Appearance counts heavily in human affairs. The good looking has many advantages and also benefits to old age. Elderly persons having youthful appearance are more optimistic, more outgoing and more social. Those having older look than their ages are stated to die earlier. Cosmetology can help to attain youthful appearance in aging. By above discussion it is proved that nutricosmetics is a connecting link between two system of medicine that is cosmetology with nutrition. The association of cosmetics with traditional medicine brings the long-standing youthful appearance. Hence cosmetology plays the main role in geriatric care and also a good carrier option.

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# ***RATNADHARANA–ADISTINCTIVE PRACTICEONRASAUSHADHI INGERIATRICS***

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*Navaratnas* are classified as precious stones in Rasashastra. These are extensively used as internal medicines by subjecting them to specific pharmaceutical procedures. It is already known that these *ratnas* have its relation with the *navagrahas*. In parallel to this many astrological texts describe the causative *graha* for various diseases. Further many Rasashastra texts also believe that wearing of *ratnas* in accordance with its *grahas* bestow health by reducing the ill effects of the disease caused. This practice of *Ratnadharana* that treats diseases with the same *rasadravyas* without subjecting them for pharmaceutical procedures saves energy, time and resources. Yet this unique practice is unaware among the majority of Ayurvedic physicians. Based on the concept of *Ratnadharana*, this paper focuses on how a specific stone shall be selected depending on the planetary positions in the horoscope of a person suffering from geriatric disorder. To accomplish this, basic knowledge on astrology about the *rashi*, *grahas* present in each *rashi*, their enmity and friendliness etc needs to be known. Considering *Vata* as the key component, as Ayurveda states that in *vriddhavastha*, *vataroga* occurs predominantly and keeping in view the findings made from the basic horoscopic analysis, we shall conclude in a broad sense that *dharana* of *Nila* (Sapphire) could help in treating the disease caused due to *Vata* in geriatrics. Similarly all other diseases can be understood under the lines of *grahas* and their management can be successfully done by adopting *Ratnadharana* that proves to be a distinctive treatment in the field of

Rasashastra.

**KEYWORDS:** Navaratnas, ratna, dharana, Nila, vataroga

## INTRODUCTION:

Rasashastra is a unique branch in Ayurveda that deals with identification, processing, preparation and utilization of resources mined from the earth crust in majority. Good importance has also been given to *Rasaushadhis* owing to their quick acting property, use in small doses, imperceptible taste and of course to be considered as a science of fortune as well.<sup>1</sup> The most important part in the field of Rasashastra is preparation of *Rasaushadhis*.

To perform the various procedures involved in the preparation of *Rasaushadhis* such as *shodhana*, *jarana*, *marana*, *lohitakarana*, *amritakarana*, *satwapatana* etc, utmost care and precaution needs to be taken in every step, as any flaw or lethargy paid anywhere in the entire process of medicine preparation may alter the therapeutic potency of the medicine which will turn fatal when administered on patients.<sup>2</sup> Parallel to this, we come across many instances with common people wearing gemstones as ornaments either to combat hardships in life or to add on grace to their existing lives and situations. This practice called as *Ratnadharana* is also done as a treatment against illness. Mostly this is done under the guidance of an astrologer who analyzes the horoscope of the person suffering any hardships or illness. The gems used in *Ratnadharana* are nothing but the *navaratnas* that are categorised as a separate set of *rasadravyas*.<sup>3</sup> Various texts of Rasashastra also state the correlation between the *navagrahas* and the *navaratnas*.<sup>4</sup> Astrologically these *ratnas* are believed to nullify the negative vibes from the planets by the radiance that it emits out. Also it attracts the positive energy from the planets and transfers the same in the form of aura to the body which in turn will resolve the disrupted metabolism in those who wear it.<sup>5</sup> In this way *Ratnadharana* is said to influence the health of a person through cosmic power. This unique method of treating a disease with the same *rasadravya* without subjecting them for any of the pharmaceutical procedures, saves a lot of energy, time and resources and it needs to be put into a wide use. Unfortunately this rare practice which can be developed as a separate treatment method or as an added on treatment with other *yukti vyapashraya chikitsa* is left untouched by the majority of Ayur-Rasavaidyas. Keeping in view the prime importance of *Ratnadharana*, with the help of basic knowledge in horoscope analysis, one can learn how to arrive at a *ratna* that can be worn in case of

geriatric diseases in a broad sense.

## MATERIALS AND METHODS:

The good effects of suitable one among *navaratnas* when worn includes protection from visha, deadly animals and diseases.<sup>6</sup>

As Jyotisha and Ayurveda are considered sister sciences, the basic ideologies of both the sciences go hand in hand. There are few astrological texts that give a better understanding about *karmaja vyadhi*, the *graha nidana* and its *chikitsa* with respect to the *graha* involved. On referring to those, *Shanigraha* can be broadly suggested as the causative *graha* for geriatric diseases.<sup>7</sup> This is stated considering *vata dosha* as the key component. Also, in Ayurveda it is said that it is only the *vata dosha* that gains predominance in causing diseases in old age.<sup>8</sup> Hence when the corresponding *ratna* for *Shanigraha* is looked for, *Nila* (Sapphire) can be arrived at as the *ratna* to be worn in geriatric diseases of *vata* origin.<sup>4</sup> This conclusion can also be given a justification for using *Nila* in *vatarogas* in *vriddhavaस्था* by astrological horoscope analysis and observation of a 68 year old female suffering from degenerative bilateral osteoarthritis of knee joint.

## CASE DETAILS:

Chief complaints:

Opain and swelling in both the knee joints since 15 years. Difficulty in walking and climbing steps.

*Upashaya*:

Oil massage followed by hot water compression

*Anupashaya*:

Long standing, continuous

walking Pre - treatment history:

Underwent allopathic pain management initially for 2 months. Patient had only temporary relief with allopathic medications

Later underwent homeopathy management for 2 years. Pain level decreased but started again due to strain.

Examination:

Inspection - both knees swollen, no redness, *veno varum* of both legs.

Palpation - tenderness present more in the left knee than in the right, warmth present in both knee joints, crepitus present in both knees but more in the left knee.

Diagnosis:

*Janu-sandhi-gata-vatavyadhi* (Bilateral degenerative osteoarthritis of knee joint)

चन्द्रः			सूर्यः    केतुः बुधः    शुक्रः
			लग्न कुजः गुरुः
राहुः		शनिः	

Figure 1 (Horoscope of patient suffering from *Janu-sandhi-gata-vata-vyadhi*)

## DISCUSSION:

Since the conclusion was made based on *Shani* as the causative *graha*, in the above shown horoscope, *Shani* is to be located. We find the *Shani graha* being placed in the 4th position from the *lagna*. The 4th place is called the *Sukhasthana* (place of comfort and happiness). Similarly the remaining places also hold respective positions for various aspects such as job, marriage, disease, education etc. Each of these 12 places corresponds to the 12 *rashis* and is owned by their respective *graha*. Now for the place where *Shani* is located, the *rashi* corresponds to *Tula* and is owned by *Shukra graha*. In general the *grahas* such as *Shani*, *Rahu*, *Ketu*, *Managala* and *Soorya* are considered as *ashubha* and the remaining *Chandra*, *Guru*, *Budha* and *Shukra* are considered as *shubhagraha*. The logic behind naming them so is that the *shubhagrahas* in general are bestowers of all good and the *ashubhagrahas* are vice versa. Both the *shubha* and *ashubhagrahas* do good and bad based on the *karmaphala* of the native in present and previous birth. But there are few selective *rashi* (boxes) where each of the nine *grahas* attains a state of exaltation and debilitation (*ucchasthana prapti* and *neechasthana prapti*). As a matter of fact, we find that *Shani* attains exaltation (*ucchasthana prapti*) in *Tula rashi* (the place where *Shani* is present in the horoscope). Here in this case,



since the *ashubha graha Shani* is located in the *Sukhasthan* and also because it attains an exalted state it gains more potential in giving *dukha* destroying the *sukha* in the form of disease. This can be understood as the severity and chronicity of the disease that the native suffers from. On the other hand, if we observe the relationship between *Shani*

(*aagantugraha*) and *Shukra* (*nijagraha*), both the *grahas* are friendly to each other. Hence the intensity of the suffering is a bit lower. This could probably be the reason why the condition is *syapya* (with the help of *bahya* and *abhyantara yukti vyapashraya chikitsa*) instead of *asadhya* where it has to be so due to *ashubha graha's* (*Shani's*) *ucchasthana prapti*. Another precise justification can be given regarding the knee joint to get affected. According to the Astro-medical text called *Parasharahrashastra*, when there is dominance of *Shani*, the body parts that get affected are knees and legs.<sup>9</sup> Here in the present case, it becomes quite evident that due to the dominance of *shani* in the form of exalted state, both the knee joints have got affected.

## CONCLUSION:

From the above made findings and discussions, we could arrive at a gross conclusion that *Nil* (Sapphire) could be the suggestive *ratna* for *Ratnadharana* in case of geriatric diseases caused out of *vata*. Also from the justification which we saw from the horoscope analysis for a case suffering from *janu-sandhi-gata-vata-vyadhi*, *Ratnadharana* with *Nil* seemed to be appropriate. However, for precise suggestion of *ratna* in other geriatric diseases occurring in separate individuals consideration needs to be given to the existing *dasha kala* of the native in order to avoid *Pratikula-ratnadharana*.

मीनः गुरुः	मेषः कुजः	वृषभः शुक्रः	मिथुनम् बुधः
कुंभः शनिः			कर्कटः चन्द्रः
मकरः शनिः			सिंहः सूर्यः
धनुः गुरुः	वृश्चिकः कुजः	तुला शुक्रः	कन्या बुधः

Figure 3 (twelve rashi and grahas that owns the rashi)


12 गुरुः Expenses, Death Liberation <b>ankles</b>	1 कुजः Soul, Body, Physique <b>head</b>	2 Wealth, Family <b>face</b> शुक्रः	3 Siblings <b>shoulders</b> बुधः
11 शनिः Income, Prosperity <b>legs</b>			4 चन्द्रः Mother, Happiness <b>chest/heart</b>
10 Job <b>knees</b> शनिः			5 सूर्यः Children, Knowledge <b>stomach</b>
9 Fortune <b>thighs</b> गुरुः	8 Longevity <b>marma</b> कुजः	7 Spouse <b>vasti</b> शुक्रः	6 बुधः Loan, Disease, Enemies <b>hip</b>

Figure 2 (schematic picture showing respective aspects of twelve rashis, the graha that owns and the dominant site of action of grahas on different body parts)

PLANETS	FRIENDS	ENEMIES	NEUTRAL	EXALTATION (RĀŚI)	DEBILITATION (RĀŚI)
सूर्यः	कुजः, चन्द्रः, गुरुः	शुक्रः, शनिः	बुधः	मेषः	तुला
चन्द्रः	सूर्यः, बुधः	-----	कुजः, गुरुः, शुक्रः, शनिः	वृषभः	वृश्चिकः
कुजः	सूर्यः, चन्द्रः, गुरुः	बुधः	शुक्रः, शनिः	मकरः	कर्कटः
बुधः	सूर्यः, शुक्रः	चन्द्रः	कुजः, गुरुः, शनिः	कन्या	मीनः
गुरुः	सूर्यः, चन्द्रः, कुजः	बुधः, शुक्रः	शनिः	कर्कटः	मकरः
शुक्रः	बुधः, शनिः	सूर्यः, चन्द्रः	कुजः, गुरुः	मीनः	कन्या
शनिः	बुधः, शुक्रः	सूर्यः, चन्द्रः, कुजः	गुरुः	तुला	मेषः

Table 1 (individual grahas and their relationship with other grahas and their individual state in each rashi)

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Rasayana is an Ayurvedic rejuvenation therapy which helps in maintenance & promotion of health. Rasayana essentially means nutrition at all levels from macro to micro-cellular level. Rasayana therapy replenishes the vital fluids of the body; boost the Ojas (vital force of life) and the immune system, thus keeping away from diseases and prevents against ill effects of advanced age. Rasayana brings about the normalcy of Rasadhatu and thereby maintain other Dhatus (body tissues) in equilibrium for a longer period. Such state of improved nutrition prevents ageing which can be understood as Vayasthapana or Jaranasana (geriatric care).

The quality of life and the life span are three intermediary perspectives by which the healthy state is maintained or otherwise it results the disease. The qualitative life is desired by everybody and this longing is the basic cassette of human entity. Ideologically the cumulative approach of keeping oneself well-being is thoroughly documented in the compendium in terms of therapeutic and behavioral aspects. Conservation of immunity, physical and psychological, is the way to achieve the normal span of life. The immuno-modulation and or anti-oxidation therapies are the means to ignite the cellular activity and these results as Jivaniya, Balya and Vayasthapaka etc. Ayushya incorporates above terms providing the healthy life and correspondingly respective measures stipulated for it. Restraining the function of mind from evil deeds enhance the psycho-threshold and sound neurological activities. The main causative factor of the disease has altered function of mind which is activated by the regular practice of ethical conducts <sup>1, 2</sup>.

In Rasendra Chudamani, Ayurveda Prakasha, RasaRatnaSamucchaya & Rasatarangini, Abhraka Bhasma<sup>3, 4, 5, 6</sup> is mentioned as known for its immuno-modulation and anti-oxidant properties also considered to be best drug of choice for Balya, Dirghayu, Vrushya & Ayushya etc.

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- [REDACTED] !  
[REDACTED]: [REDACTED] !! ([REDACTED] 2/147)
- [REDACTED] !  
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[REDACTED] . . . ([REDACTED] 10/72-73)
- Considering the Properties & Phalashruti of Abhraka Bhasma in all the above mentioned references it is clear that, by virtue of its properties like Snigdha, Deepana, Sheetavirya, Tridoshashghna, Medhya, VayaSthambhana, Rasayana, Balya, Ayushya etc. Abhraka Bhasma is considered to be best drug of choice for Rasayana/Vayasthapana.

## Discussion:

- **Vruddhapyā** is inevitable, but with the highly potent Rasadravyas like Abhraka we can turn it into more charming by virtue of its properties like Snigdha, Deepana, Sheetavirya, Tridoshaghna, Medhya, VayaSthambhana, Rasayana, Balya, Ayushya etc.
- Abhraka is a powerful mineral compound which comprises of **minerals such as silicon, iron, calcium, magnesium, and potassium**. It also contains aluminum, sodium, titanium, chlorine and phosphorus in traces.
- **AbhrakaBhasma** exhibits a potent In-vitro **Immunomodulatory** (stimulant) activity.
- **AbhrakaBhasma** brings about stimulation of Leucocytes and thus in turn leads to highly significant **phagocytic activity** which is evident from the Invitro Nitroblue Tetrazolium (NBT) assay test<sup>7</sup>.

## Conclusion:

- Abhraka Bhasma is a potent Rasayana (Immunomodulator).
- Abhraka Bhasma brings about longevity & disease free life.
- Thus, **Abhraka Bhasma** is a **best Vayasthapana Dravya**.

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