Associate Partners

BOOK RIVERS
WE CREATE READERS

BOOK AVAILABLE

GET IT ON Google Play | Flipkart | amazon | amazonkindle

ISBN 978-93-5515-010-3

₹ 1499/-

सुसंज्ञा 2021

BOOK RIVERS
WE CREATE READERS

PROCEEDING OF

INTERNATIONAL CONFERENCE

on 19 & 20 November 2021

Theme- Geriatric Diseases-Care and Cure to Celebrate

आज़ादी का अमृत महोत्सव

WORLD AYURVEDA DAY - 2021

jointly organized by

Gujrat Board of Ayurvedic & Unani System of Medicine & Parul University

सुसंज्ञा 2021

Organized by : Department of Shalakya Tantra,
Parul Institute of Ayurved, Parul University.

PROCEEDINGS OF INTERNATIONAL CONFERENCE

THEME-GERIATRIC DISEASES-CARE AND CURE

SUSANJNA

ORGANIZED By:

Department of Samhita Parul Institute of Ayurved, Parul University

BOOK RIVERS
WE CREATE READERS

Disclaimer

The responsibility for opinions expressed in articles, studies and other contributions in this publication rests solely with their authors, and this publication does not constitute an endorsement by the Book Rivers of the opinions so expressed in them.

Proceeding Of International Conference SUSANJNA-2021

ISBN:

Published by : Book Rivers (www.bookrivers.com)

(www.brpressindia.com)

HN: 22 Kanchan Nagar Maickale Lucknow

Mobile: 9695375469

CHIEF – PATRON

DR. DEVANSHU J. PATEL
PRESIDENT, PARUL UNIVERSITY

PATRONS

DR. PARUL PATEL
VICE-PRESIDENT
PARUL UNIVERSITY

DR.KOMAL PATEL
MEDICAL DIRECTOR,
TRUSTEE

DR. GEETIKA PATEL
MEDICAL DIRECTOR,
TRUSTEE

EDITOR IN CHIEF

DR. HEMANT TOSHIKHANE
DEAN, FACULTY OF AYURVED,
PARUL INSTITUTE OF AYURVED,
PARUL UNIVERSITY, VADODARA

MANAGING EDITOR

DR. B. G. KULKARNI
PRINCIPAL,
PARUL INSTITUTE OF AYURVED AND RESEARCH,
PARUL UNIVERSITY, VADODARA

EDITOR

SHALAKYA DEPARTMENTAL FACULTY PROFILE			
FACULTY NAME	QUALIFICATION	DESIGNATION	PHOTO
Dr RAJEEV G. DOLE	B.A.M.S., P.G. DIPLOMA (SHALAKYA TANTRA), M.S. (SHALAKYA TANTRA)	PROFESSOR & HOD	
Dr MANJIRI P. KESKAR	B.A.M.S., M.D. (SHALAKYA TANTRA), PhD (SHALAKYA TANTRA)	PROFESSOR	
Dr ALAKNANDA V. MISHRA	B.A.M.S., M.S. (SHALYA TANTRA)	ASSOCIATE PROFESSOR	

Dr SHIVKANT V. SHARMA	B.A.M.S., M.S. (SHALAKYA TANTRA – NETRA ROGA), PhD SCHOLAR	ASSISTANT PROFESSOR	
Dr SHALAKA M. MORE	B.A.M.S., M.S. (SHALAKYA TANTRA – NETRA ROGA), PhD SCHOLAR	ASSISTANT PROFESSOR	

FOREWORD

I feel honoured to be requested to write the foreword for this excellent work as special add on by the efforts from the Department of Shalakya Tantra on conducting Pre International conference Susangya 2021 under Azadi ka Amrut Mahotsav on 16/10/2021 presiding eminent guest speakers.

I am indeed happy to write a foreword to the book which is combined efforts from the department of Shalakya Tantra. It has taken a herculean task to compile this book after referring voluminous literature of past and present with reference to Geriatric practice: cure and care by the scholars. This is a genuine work compiling original references by the authors from Ayurveda and contemporary sciences. The resources provide comprehensive knowledge about the subject prepared in accordance with the diseases, drugs involved and its etiopathogenesis. Ayurvedic system of medicine has been practiced in the country and globally from time immemorial and has stood the test of many adversities over centuries.

This book of proceedings from the Department of Shalakya Tantra will be a timely contribution to students, practitioners, scholars and researchers of ayurvedic medicine. The purpose of this book will be served by the progressive discussions and constructive feedbacks from the readers. I am sure the readers will be benefited immensely by this book. I wish the department to get more such opportunities to convert such intricate subject into an interesting and readable one.

Dr. B. G. Kulkarni

M.D., Ph.D. (Rachana Sharir)

Principal & Medical Superintendent

Parul Institute of Ayurved & Research

Parul University

WEBINAR REPORT

SUSANDNYA – 2021

16th OCTOBER 2021

Parul University in collaboration with Gujarat Board of Ayurvedic & Unani System of Medicine organised a one-day Pre-Conference webinar as a part of international conference ―Geriatric Diseases Care & Cure‖, which will be held on 20th and 21st November 2021.The Webinar focused on the protection of sense organs.

The programme started at 09:30 am with the welcome address by Dr. Hemant Toshikhane Sir, Dean & Principal, Parul Institute of Ayurved, Parul University. The webinar was coordinated by Dr. Shalaka More, under the guidance of Dr. Rajeev Dole Sir, and Dr. Manjiri Keskar Madam. Opening remarks & introduction of the programme was given by Dr.Shivkant Sir. He highlighted on the word ―SUSANDNYA‖, which means sandnyavahan karma done by our sense organs eye, nose, ear & tongue, an important part of carrying information to brain.

Subject experts Dr. Shamsha Fiaz madam, Dr. Pundareekaksha Rao sir & Dr. Saudhan Desai sir stalwarts in their respective fields, were the dignitaries invited for the webinar.

Dr. Shamsa Fiaz B.A.M.S, M.S, (Ayu), PhD, Professor & HOD, Department of Shalakya Tantra, National institute of Ayurveda, Jaipur, Rajasthan, presented on preventive measures to be followed in disease control in old age.

Dr. Pundareekaksha Rao MD (Ayu), MA(Sanskrit), Diploma in yoga, Associate Professor & HOD, Department of Shalakya Tantra, Ayurveda College, colambatore, Tamilnadu, highlighted on precautionary measures in Geriatric ENT disorders.

Dr. Saudhan Desai MBBS, MS (Ophthalmology), Assistant Professor, PIMS & R, Parul University, Vadodara, Gujarat, talked about modern techniques & methodology in Geriatric Ophthalmic surgeries.

The paper presentation session was held from 2.00pm onwards. In this session, papers were presented by PG scholars & Faculty of shalakya Tantra from all over India. Paper presentation session was supervised & evaluated by chairpersons Dr. Narayan Balavatti Sir,Associate Professor,Department of Shalakya Tantra,All India

Institute of Ayurved Sciences, New Delhi, & Dr. S M Pasha Sir, Associate Professor, Government Ayurved Medical College, Bengaluru, Karnataka. After presentation winners for presentation were announced. Dr Neena, Dr Sreeshma & Dr Rajkumar Rathod secured 1st ,2nd & 3rd position respectively.

Finally, Dr. Manjiri Keskar Madam expressed her gratitude towards the managemaent Dr. Komal Patel Madam, Dr. Hemant Toshikhane sir,Dean & Principal Parul Institute of Ayurved & Dr. Bhagwan Kulkarni sir Principal Parul Institute of Ayurved & Research for their constant support & encouragemen in providing such platforms & concluded the session with vote of thanks.

CONTENTS

***

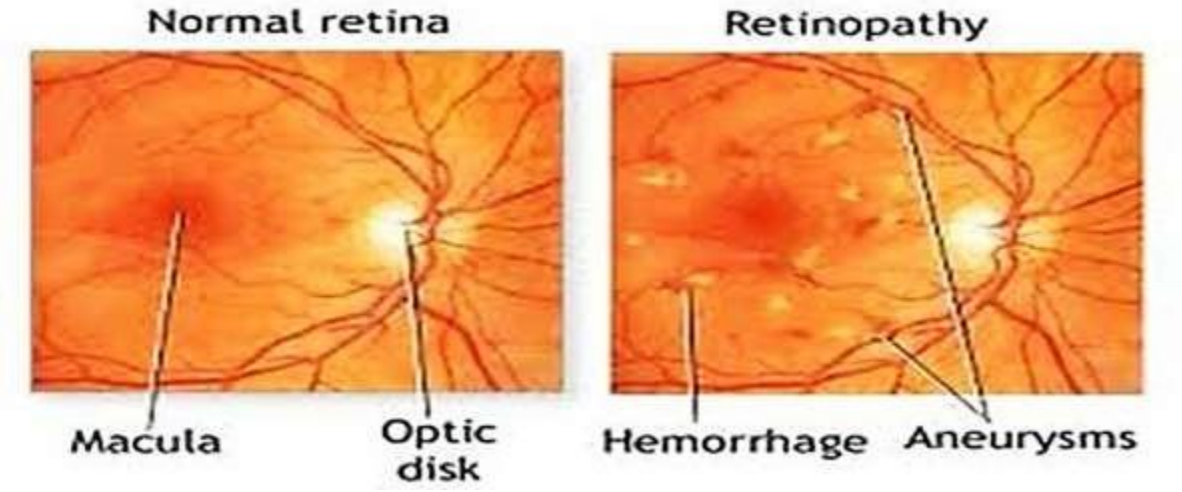
MANAGEMENT OF HYPERTENSIVE RETINOPATHY THROUGH AYURVEDA

Dr. Anu Vijayan

(Final year, PG Scholar, Parul institute of Ayurveda, Guided by Dr. Manjiri Keskar)

INTRODUCTION:

- Hypertension is a life style disorder
- The person is said to be hypertensive when the B.P is more than 140/90mmHg
- Poorly controlled hypertension leads to many systemic illness like cardiovascular, cerebrovascular etc.

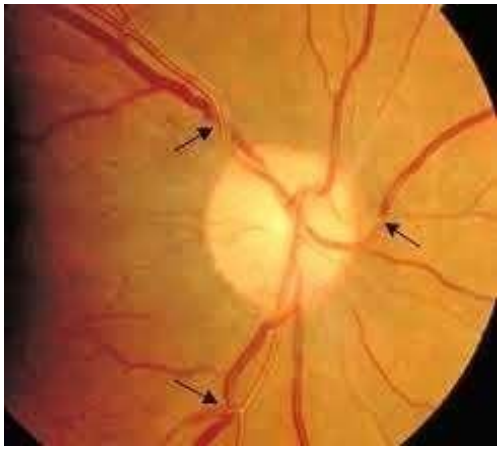


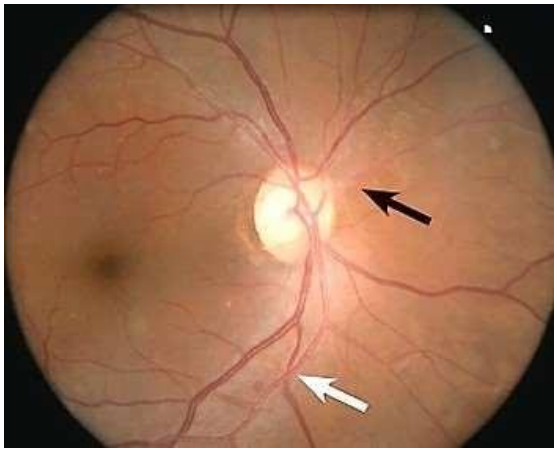
Hypertensive retinopathy

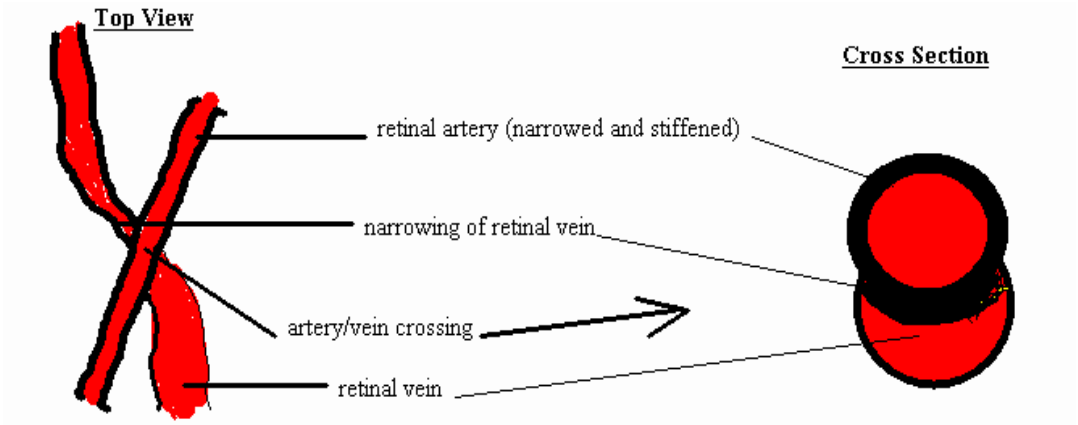
- It is the ocular manifestation or the fundus changes occur in the patients of systemic hypertension

PATHOGENESIS

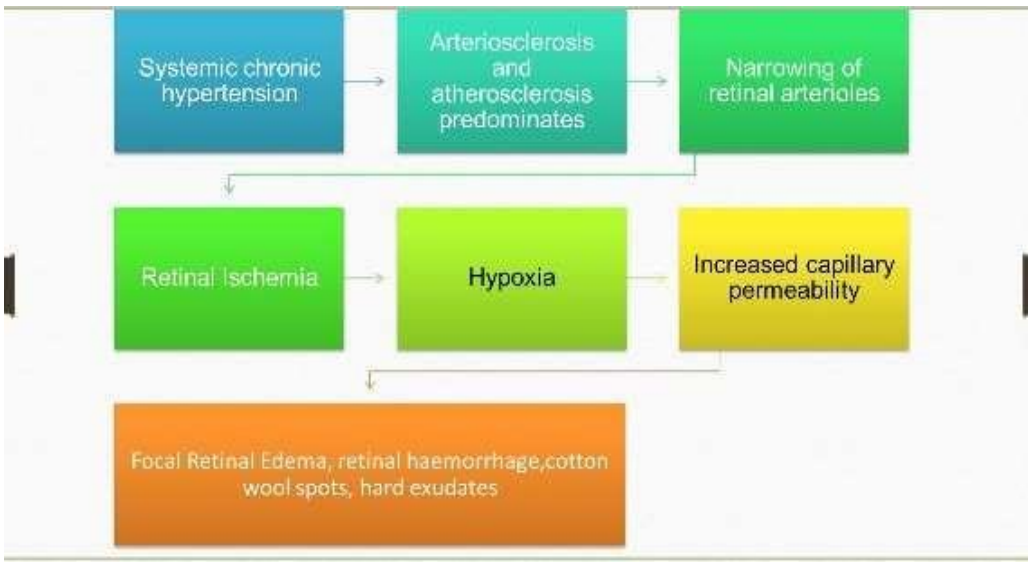
- 3 factors play a role in the pathogenesis
    1. Vasoconstriction
    2. Arterioscerotic changes
    3. Increased vascular permeabilty







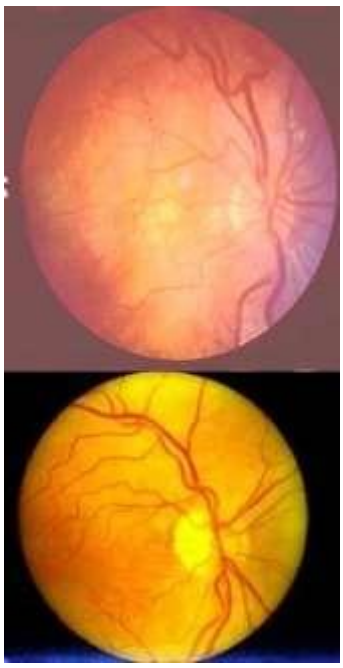
The increased rigidity of the artery compresses ('crimps') the less rigid vein. This causes reduced blood flow and allows platelets to form a clot, which can block (occlude) the vein

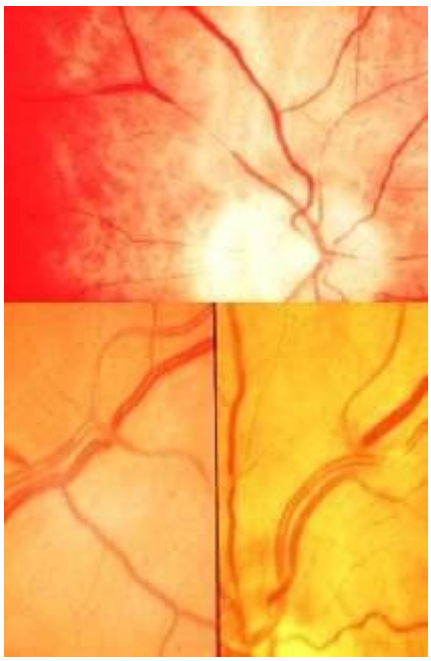


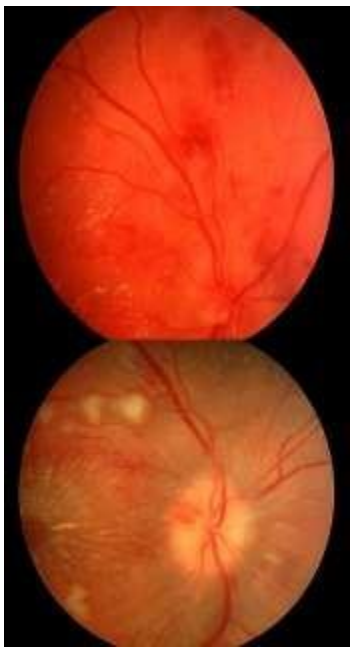
Keith and wegner Grading of HR

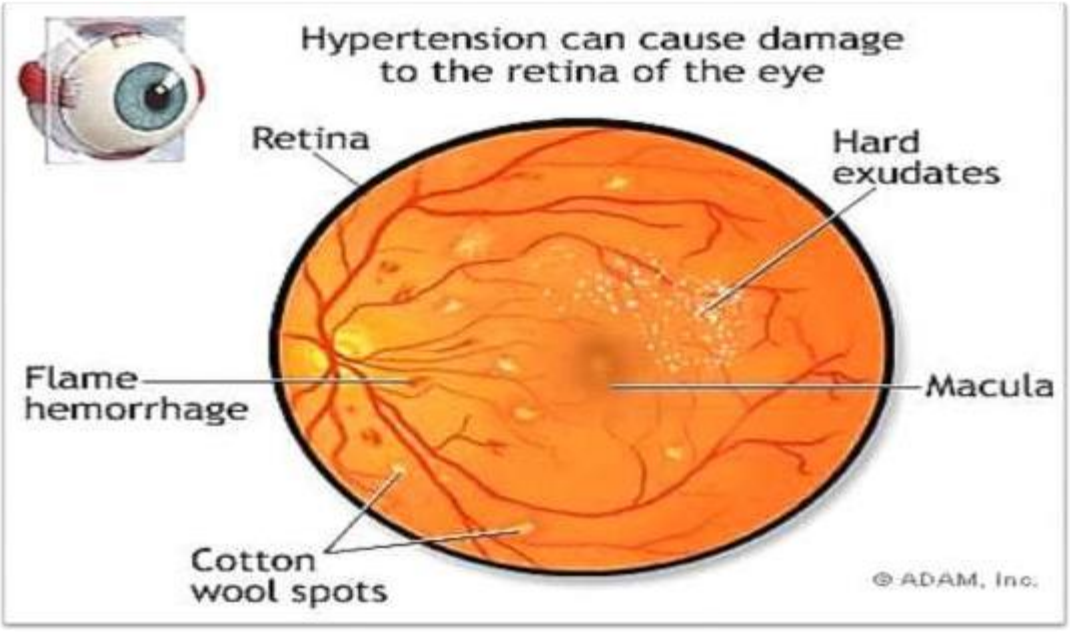
- Grade I- mild generalised arteriolar attenuation
- Grade II- marked generalised narrowing and focal attenuation of arterioles associated with deflection of veins at the arteriovenous crossing
- Grade III- Grade II+ Copper wiring of Arterioles, Bonnet Sign, Gunn sign, Salu‘s sign, flame shaped haemorrhages, cotton- wool spots and hard exudates
- Grade IV- Grade III+ Silver wiring of Arterioles and Papilloedema

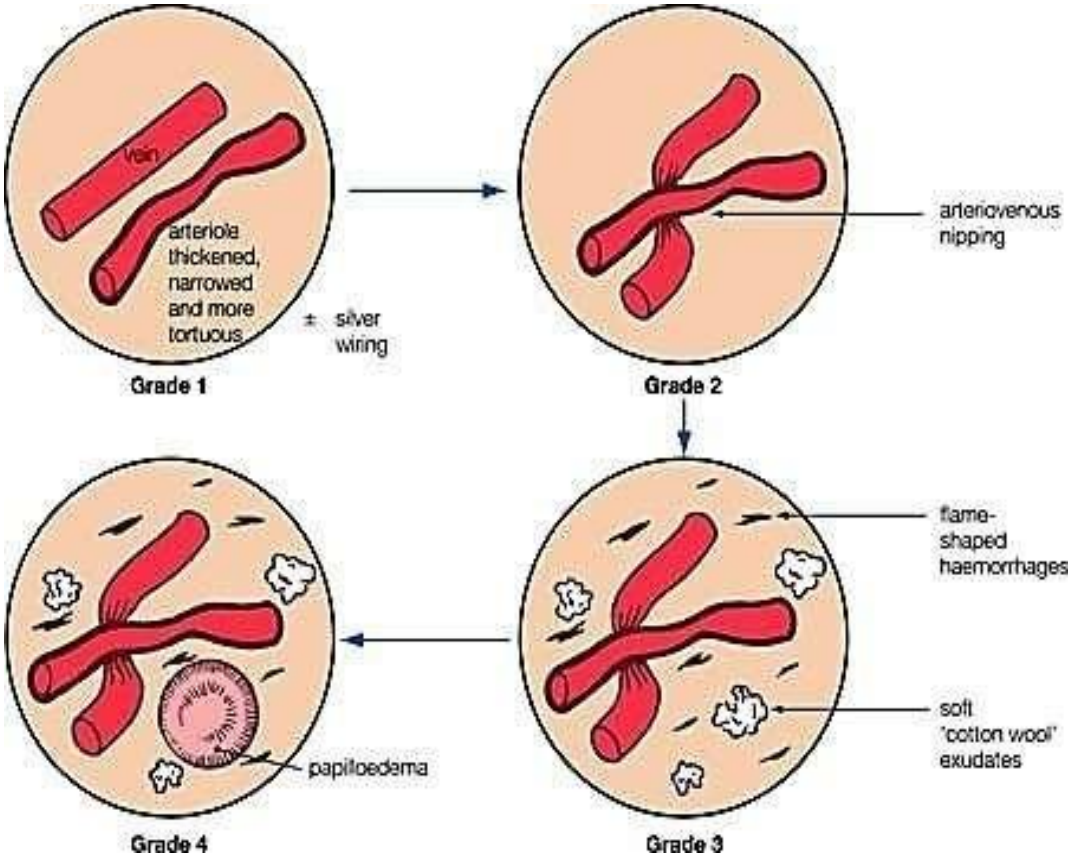
Grade 1	Mild generalized retinal arteriolar narrowing
Grade 2	Definite focal narrowing and arteriovenous nipping
Grade 3	Signs of grade 2 retinopathy plus retinal hemorrhages, exudates and cotton wool spots
Grade 4	Severe grade 3 retinopathy plus papilledema








Hypertension can cause damage to the retina of the eye
Retina
Hard exudates
Flame hemorrhage
Macula
Cotton wool spots
© ADAM, Inc.


vein
arteriole thickened, narrowed and more tortuous
± silver wiring
Grade 1
arteriovenous nipping
Grade 2
flame-shaped haemorrhages
soft 'cotton wool' exudates
Grade 3
papilloedema
Grade 4

Clinical Types

1 Hypertension with involuntary sclerosis

2. Hypertension without sclerosis

3. Hypertension with compensatory arteriolar sclerosis

4. Malignant hypertension

- ❖ Retinopathy in pregnancy-induced Hypertension

Management

- Aim- prevent, limit or reverse the target organ damage by lowering the high BP

1. Life style changes

2. Reduce the BP by taking medication accordingly

Ayurvedic Treatment

- Hyper tensive retinopathy asymptomatic
- 1st and formost treatment is to reduce the hypertension
- As hypertension is an life style disorder , we have to follow the dinacharya and pathya ahara and vihara and also decrease the stress
- Pranayama and yoga will help to reduce the stress
- Sarpagandha, amalaka, jadamaamsi are the drugs which are beneficial for reducing the BP
- In the pathogenesis of HR
    - sanga
    - medodhatu dushti
    - praanavayu rodha are present.
- It should be systematically corrected by vata anulomana treatment .
- Snigdha virechana and vasti can be given.

In grade I and II stage

- Agni sandhooshana
- Aamapachana
- Vaatanulomana
- Pittahara treatments are beneficial

In grade III

- Urdhvagata raktapitta treatment can be adopted
- Kaphamedohara treatment

In grade IV

- Sophahara chikitsa

Conclusion

- Hypertensive retinopathy is an asymptomatic disease.
- But it is considered as a predominal symptoms of cerebrovascular accident. So hypertensive patients always do efforts to normalized their B.P by taking medications and yoga.
- Hypertensive patients are advised to check their eyes at least 3-4 times/ year

***

CARE AND CURE OF GERIATRIC DISEASES IN SHALAKYA TANTRA

Dr. Atri Ghosh

(1st year PG Scholar from Dr. D.Y. Patil College Of Ayured and Research centre)

INTRODUCTION:

Shalakya Tantra is one among the eight branches of Ayurveda which deals with the swasthya as well as the chikitsa of diseases pertaining to eye, ear, nose, throat and head. The aim of shastra is swasthya swasthya rakshana and aatura vikaara prashamana. A person is said to be swastha if he has samaagni, samadhatu, sama dosha, proper mala kriya along with prasanna aatma mana and indriya. To obtain this swsasthya, following pathya, dinacharya, ritucharya, sadvrutta, ahara and vihar as well as avoidance of apathya, vegarodha, ahara and vihara is important.

AIM AND OBJECTIVE:

Comparative literary study was carried out on preventive and curative aspect of eye, ear, nose, throat, and head diseases according to both ayurvedic and modern science.

METHODOLOGY:

Manual and electronic search was done on Charak Samhita, Susruta Samhita and Astanga Hridaya.

DISCUSSION:

Common regimens should be followed for curative and preventive aspect of Urdha jatrugata vikar

1. DINACHARYA- There are certain charyas mentioned by Acharya vagbhata where there is direct reference to indriyas such as danta dhavana, anjana etc.

DANTA DHAVANA (A.H):

(brushing teeth)- It gives indriya laghuta (A.S). Twigs of drugs such as arka, nyagrodha, karanja, khadira, kakubha etc has been mentioned by vagbhata

(A.H.Su.2/2). Mainly katu tikta kashaya pradhana rasas are recommended as it help to reduce the srotorodha during morning hours especially which may be present in mukha (shiras being the kapha sthana).

Akshi sinjana (A.S) - Washing the eyes to clear out the netramala.

KAVALA- GANDUSHA (A.H.Su.22) - Gandusha: holding of liquid in the oral cavity with out any movement. use of tila taila / mamsarasa has been recommended. We may also use salt water, triphala siddha jala, tila boiled water.

Kavala: holding to such an extent that movement is possible.

Acharya vagbhata while explaining the phalashruti of gandusha has mentioned its effect in akshi, shiro, karna, mukha rogas.

PRATIMARSHA NASYA:

Method of instilling oushadha 3 -4 drops in nostrils.It Can be done from birth itself. By daily practice, it bestows benefits like that of marsha.

It can be done with Tila taila, Anu taila. Among the phalashruti of nasya, drudhata (strength) of indriya is mentioned.

ANJANA (A.H.Su.2) – It means Application of collyrium in eyes . It is pleasing to eyes.Use of rasanjana prayoga is also recommended once in a week. The purpose of anjana considered as a dinacharya is to protect the pitta pradhana avayava netra from the attack of excess kapha (shiras being the kapha sthana) which otherwise is prone to netra rogas like Abhishyanda.

DHOOMAPANA Acharya vagbhata has mentioned dhoomapana also along nasya and gandusha in dinacharya .It is specifically indicated in kapha-vataja vikaras. Akshi srava is an indication of dhoomapana. As such, classical dhoomapana is not possible in our daily practice, but steam inhalation is a choice.

MUKHAALEPA: Applying lepa over face, makes vision keen.

ABHYANGA : Abhyanga or application of oil on whole body provides drushti prasaada *Shira shravan paadeshu tam visheshena sheelayet(A.H.Su.2/).* It has been also mentioned that one should apply oil specially in shiras, karna and paada

SNANA: As per Susrutha Acharya, snana strengthens indriyas. One should take head bath with cold water.(hot water head bath is achakshushya).

2. SADVRUTTA-

USHNEESHA DHAARANAM: Wearing head protection/ turban/hat -To protect from vaata, aatapa, rajas.

CHATRA DHAARANAM -Protect from rain,wind,dust ,snow etc. It is wholesome for vision and ojas.

CHANKRAMANAM-Activates sensory organs

For the control of indriyas, one should suppress the vegas sucha as lobha, dvesha etc.

3. RITUCHARYA: - Shodhana karma recommended according to dosha kopa in seasons/ritus.

• **In Hemanta & Shishira-** Abhyanga, Murdhataila, Ushnopachara.

• **In Vasanta -** Vamana

• **In Greeshma -** Sheetopachar• In Varsha - Asthapana Vasti

• **In Sharat -** Virechana, tiktaka ghrita, Raktamokshana.

SOME SPECIFIC PREVENTIVE AND CURATIVE MEASURES OF GERIATRIC DISEASES IN SHALAKYA-

MEDICATED DHUMPANA	KARNA ROGAS - Karna kandu, karna gootha, karna paka, karna pratinaha, karna vidradi, karna sopha	DRUGS- Guggulu, agaru, hingu, rasanjana etc.	Can also be practiced as DINACHARYA.
KARNA PURANA	KARNA ROGAS- Vataja karnarogas, badhirya, karna shoola, karna nada, karna ksweda	DRUGS- Ghrita, ksheera sarpi, swaras of arka, tulasi, vasa, lasina, adraka, tila	Can also be practiced as Dinacharya.

		taila etc.	
TRAYOUPASTAMBHA/TRIPODS OF LIFE- Includes ahara, swapna and bramhacharya which sustain and maintain life if followed properly.			
YOGA -Various yoga postures/asanas improve blood flow to the cochlea and prevent neurotransmitter damage.Helpful in preventing progressive hearing loss.Greeva chalan, skandh chalan, bhramari pranayam, kumbhak etc., are beneficial.	KARNA ROGAS - Badhirya		
RASAYANA Anti-ageing therapies ,herbs with anti-ageing properties with high nutritional value are beneficial.		DRUGS Amalaki, paribhadra bala etc.	
KARNA PRAKSHALANA - Ear syringing with lukewarm water or	KARNA ROGAS - Karna kandu, karna gootha, karna sopha	DRUGS Triphala decoction, araghwadadi	

medicated decoctions.		kashaya	
Vata Shaman chikitsa, Brimhana nasyam, Sirobasti, Sirodhara by oil, Netratarpana	Dry AMD (Vata kapha dusti)		
Pittashamana, Chakshushya, Rasayan Drugs	Wet AMD (Pitta rakta dusti)	Drugs Jyotishmati, Yastimadhu, Amlaki, Satavari	
Chakshushya, Rasayan drugs, Kriya kalpa (Anjana, tarpana, Aschotanam etc)	Timira	Drugs Puran ghrita, triphala, satavari, potala, mudga, Amlaki, yava	
Netrakriyakalpas like Tarpana, Netradhawan regularly & some intake Netrarasayan drugs	Presbyopia (dwitiya patal gata timira)		
Siro dhara, Siro basti, Nasya, Aschotana, pariseka	Dry Eye Syndrome	Aschotana by eranda taila, pariseka by Dugdha,Anu taila nasya	

Diseases	Pathya	Apathya
Diseases of Eye	Triphala, Sarpi, Draksha	Masa, Arnala, Kulattha, Matsya
Diseases of mukha	Baalamoolakam- Tamboolam, khadira- katu tikta rasa varga	Amla - Matsya maahisha aamisham- Dadhi- ksheera- Guda maasha- Ruksha anna - guru abhishyandi
Diseases of Nasa	Shigru- Baalamoolakam- Lashunam- Dadhi- Taptaambu	Virudha anna- Abhishyandi- guru
Diseases of Karna	Mudga- Yava- Kukkuta maamsa- Patola- Shigru	Virudha anna paana
Diseases of Siro roga	Shashtika shaali- Yusha- Dugdha- Dhanvamaamsa- Patola Shigru- Draksha- Maatulunga- Narikela	Dushta neeram(polluted water)- Virudha annam- Jala from sahya and vindhya mountains

Vegarodha (suppressing urges) (A.H.Su.4)

- **shakrut –** prathishyaya, shiroruk
- **Kshavathu-** shiro ruk, indriya dourbalyam
- **Trishna rodha-** badhiryam
- **Bashpa rodha-** peenasa, akshi shiro ruk
- **Nidra rodha**- Akshi gourava

Conclusion-

A variety of systemic and local procedures were practiced for Geriatric conditions. But today perhaps they are absolutely of limited practice. It would be appropriate to try these time tested ancient measures on scientific parameters so that Ayurveda can help the sufferings in a better way

***

MANAGEMENT OF ISOLATED (LEFT) SIXTH CRANIAL NERVE PALSY THROUGH AYURVEDA: A CASE REPORT

Dr. Chaitali Kulkarni,

M.S. Scholar, Shalakyatantra, Y.M.T. Ayurveda Medical College, Kharghar

Email: ckkulkarni512@gmail.com ,

Mobile: 9757398266.

Dr. Nutan Radaye

HOD and Professor, Shalakyatantra, Y.M.T. Ayurveda Medical College, Kharghar, Navi Mumbai.

Email: nutan.radaye.nr@gmail.com

Mobile: 9820512695

Abstract:

Introduction- Sixth cranial nerve palsy refers to paralytic strabismus resulting from complete or incomplete paralysis of lateral rectus muscle of the eye. Abduscens nerve is responsible for contraction of lateral rectus muscle which abducts the eye. Patients with Abduscens nerve palsy have horizontal diplopia that worsens when looking in the direction of the affected eye. Microvascular ischemia due to hypertension, Diabetes Mellitus is the most common cause for Isolated sixth nerve palsy. Although in most of the cases of ischemic mononeuropathies, diplopia recovers spontaneously within 4-6 months, it can hinder the daily life of a patient to a great extent. Management options in Allopathy are occluding the eye or using prisms until the diplopia subsides. In Ayurveda, diplopia is described as a symptom of Dwitiya patalgat dosh dushti (timir) by Acharya Vagbhat and trutiya patalgat dosh dushti (timir) by Acharya Sushrut.

Case Presentation- A 65-year-old man with history of Diabetes Mellitus for past 11 years and Hypertension for past 5 years, presented to the institution‘s Shalakya tantra outpatient department (OPD) in March 2021, with a sudden onset of horizontal diplopia since 2 days. After thorough clinical examination, he was diagnosed with Isolated Sixth nerve palsy and underwent Ayurvedic treatment of

Nasya, Netratarpan, Viddhakarma and abhyantar chikitsa He got complete remission of his symptoms in 1.5 months.

Conclusion- Ayurvedic treatment plays an important role in the treatment of Isolated sixth nerve palsy by improving the symptoms and quality of life of the patient. Further studies, case series with similar cases need to be conducted to validate the role of Ayurvedic management in nerve palsies.

Keywords: Isolated sixth nerve palsy, case report, Ayurvedic management, timir, diplopia.

Introduction:

Abduscens nerve is the sixth cranial nerve that supplies the lateral rectus muscle of the eye. Contraction of the lateral rectus muscle is responsible for abduction of eye.

Disease review: Sixth cranial nerve palsy refers to paralytic strabismus (ocular deviation) resulting from complete or incomplete paralysis of lateral rectus muscle of the eye. It occurs due to damage to the Abduscens nerve. Symptoms present are horizontal diplopia that worsens when looking in the direction of the affected eye or fixating at a distance than at near. On examination of ocular motility, following may be present: esotropia of the affected eye, abduction deficit of the affected eye, compensatory head-turn towards the affected eye.

Causes for sixth nerve palsy include:

1) Microvascular ischemia- due diabetes mellitus, hypertension atherosclerosis, thus causing damage to the small blood vessels that nourish the nerve.

2) Neoplastic lesions- compression in the nerve pathway due to brain tumours.

3) Inflammatory lesions- due to multiple sclerosis, meningitis, infectious lesions of cavernous sinus and orbit,

4) Trauma- head injury or direct or indirect trauma to the nerve trunk.

5) Increased intracranial pressure.[1]

Diagnostic work-up for sixth cranial nerve palsy includes dilated fundus examination to rule out papilloedema. Laboratory investigations like Complete Blood Count, HbA1C, blood sugar level test help to assess for microvascular causes. Erythrocyte Sedimentation Rate, C- reactive protein, RA factor help to rule out any inflammatory causes of nerve palsy. Imaging (MRI- brain and orbit) help

in assessing the malignancy, aneurysm, stroke. Frequently found cause of Isolated sixth nerve palsy is microvascular mononeuropathy caused due to diabetes mellitus, hypertension, hypercholesterolemia.

Isolated sixth nerve palsy due to microvascular mononeuropathy resolves spontaneously in 3- 6 months in most of the cases. Yet, diplopia experienced by the patient hampers his daily life to a great extent. Management options available in Allopathy for diplopia are occluding the affected eye by patching or fogging, using prisms, botulinium injections or strabismus surgery for a long-standing deviation of six months or more[1].

The symptoms of sixth nerve palsy can be correlated with Dwitiya patalgat dosh dushti lakshan of ‗dwidhaikam drushtimadhyasthe'2 by Acharya Vagbhat and trutiya patalgat dosh dushti lakshan of ‗drushtimadhyagate doshe sa ekam manyate dwidha'3 by Acharya Sushrut. Both the acharyas have considered the symptom of double vision under the context of Timir.

Case Presentation:

A 65-year-old male patient presented on 12th March 2021 to the Shalakya tantra OPD of the institution, with an acute onset of horizontal diplopia since 2 days. Diplopia worsened while looking towards the left side. He was a known case of diabetes mellitus since 2010 and hypertension since 2016. Past surgical history revealed both eyes-cataract operated in 2014 and left leg amputation due to gangrene in 2016. He was on the following medications:

Table 1- Medical history at the time of first visit:

Medicine	Dose
1. Injection Insulin (R) 8 units	TDS
2. Injection Insulin (N) 15 units	BD
3. Tab. ASP (75)	0-1-0
4. Tab. Plagril (75)	0-1-0
5. Tab. Ramipril (2.5)	0-0-1
6. Tab. Amlo (5)	1-0-0

He underwent Ayurvedic treatment and got complete remission of symptoms in 1.5 months. The symptoms can be correlated with Dwitiya and Tritiya patalgat dosh dushti/ timir. The treatment planned was mainly vaat-pittahara.

Clinical Findings and Diagnostic Assessment:

Visual acuity: Right eye-6/60, Left eye-6/9, near vision- N36. Anterior segment examination was unremarkable. Pupils were round, regular, reacting to light. Dilated fundoscopy revealed no abnormalities in the optic disc/ central retina.

Diplopia increased in left lateral gaze. Extraocular muscles motility: inability to abduct left eye on left lateral gaze. All extraocular muscle movements of the right eye were intact.

Laboratory investigations: BSL fasting- 145 mg/dl, post prandial- 244 mg/dl (13/3/2021). Blood pressure- 130/90 mm of Hg

Therapeutic Intervention:

दोषानरोधेन च नक्शास्तं स्नेहास्नव स्रिणाक्रस्य:।

उनचरद्जनमधबसु सबसयतनणरनसक:॥

१३/४७, *Samanya chikitsa* of *timir*

Table 2- Treatment Given To The Patient

Drug	Ingredients	Dose	*Anupana*	Duration	Source
1.Capsule Palsinuron	*Mahavatvidhwansa, ekangaveer ras, sameerpannag ras, sutshekhar ras,*	2-0-2	Warm water	1.5 months	SG Phyto pharmaceuticals
2. Tab. *Dhatri-nisha*	*Amalaki, haridra*	1-0-1	Warm water	1.5 months	*Agasti* pharmaceuticals

3.*Dashamo olarishta+ Pathyadi kadha*	*Dashamool, triphala, kirattikta, haridra, nimba, shunthi*	3 teaspoon each	Warm water	1.5 months	*Sandu* pharmaceuticals
4. *Nasya- ksheerbal aavarthi 101*	*Go dugdha, bala*	6 drops each nostril- for 7 days. Later, 2 drops daily		1.5 months	*Vaidyaratnam*
5. *Netra tarpan- Jeevant yadi ghrut*	*Jivanti, ghrut, kakoli, kshirkakoli, pippali*			6 days	*Vaidyaratnam*
6. *Viddhakarma*	*Vedhan* with 26 no. ½ inch needle at *upanasika, lalaat, apanga*[4]	Twice/week for 1 month Later, once/week for1 month		2 months	
7. Tab. *Panchatikta ghrut guggul* (started 15 daysafter 1st visit)	*panchatikta Go ghrut, guggul*	2-0-2	Warm water	1.5 months	*Shree Dhootpapesh warltd.*

Follow-up and Outcomes:

Table 3- Examination of patient at every 15 days-follow-up

	1st visit	After 15 days	After 1.5 months
Diplopia	Present, increased in left lateral gaze	reduced	Absent, no diplopia in left lateral gaze
Movement of left eye	Inability to abduct	Slight movement in abduction	Normal Abduction

Complete remission of symptoms was seen in the patient after 1.5 months of treatment. Above treatment was continued for another 2 months and then stopped. The patient hasn‘t reported any recurrence of symptoms since then. (Images will be added in the presentation.)

Discussion:

On the basis of *samanya chikitsa* of *timir* and *vaatpitta dosh* predominance, *vaataj* and *pittaj timir chikitsa* was planned. *Nasya* and *tarpan* facilitate nourishment of the nerve. *Jeevantyadi ghrut*[5] and *ksheerbala avarthi 101*[6] oil have *vaat-pittahara* contents as mentioned in *timir chikitsa*. *Dhatri-nisha* tablet acts as *rasayan* in Diabetes mellitus. Tikta ras dravyas mainly are used.

More improvement was seen after 15 days on adding *Panchatikta Ghrut Guggul* to thetreatment.

Although the palsy may resolve spontaneously over time, complete remission of symptoms in 1.5 months by *Ayurvedic* treatment is suggestive of its role in the management of Abduscenspalsy.

Patient Perspective:

I am thankful for helping me cope with this discomfort. On 10th March, 2021, I woke up in the morning to see two images of everything. I started finding it difficult to even carry out my chores. On 12th March, I visited your OPD and was relieved by your words of support. My symptoms kept on improving after starting the treatment and was totally free of symptoms after around 1.5 months of treatment.

REFERENCES:

1. Khurana A.K. Comprehensive Ophthalmology, 4th edition, New Delhi, New AgeInternational (P) Limited, 2011, pg. no. 330-332.
2. Kaviraj Atridev Gupt, Ashtangahrudayam with Vidyotini Commentary, Varanasi, Chaukhamba Sanskrit Pratishthan, 2012, Uttartantra, chapter 12, shlok no. 4, pg. no. 667.
3. Kaviraj Ambikadatta Shastri, Sushrut Samhita, Varanasi, Chaukhamba SanskritPratishthan, 2011, Uttartantra, chapter 7, shlok no. 14, pg. no. 42.
4. Dr Ghanekar G.B., Sushrut Samhita: Sharirsthanam with Ayurvedarah asyadipika Hindi commentary, New Delhi, Meharchand Lachhmandas Publications, 2001, chapter 8, shlok 29,pg. no. 223.
5. Kaviraj Atridev Gupt, Ashtangahrudayam with Vidyotini Commentary, Varanasi, Chaukhamba Sanskrit Pratishthan, 2012, Uttartantra, chapter 13, shlok 2-3, pg. no. 670.

***

A CLINICAL CASE STUDY ON KARNABADHIRYA WITH AYURVEDIC MANAGEMENT

Dr. Deepti Sharma

Assistant Professor, Shalakya Tantra Department, Ramkrishna College Of Ayurveda And Medical Science, Rkdf University, Bhopal (M.P)

Abstract:

Ageing is the process during which structural and functional changes accumulate in an organism as a result of the passage of time. The changes manifest as a decline from the organism's peak physiological functions. Ageing is biological clock of all human body. Presbyacusis is an hidden disability, one among the many socio-medical problems. The hearing impairment in elderly people is described as presbyacusis. Hearing problem among elderly people is a major issue and a person with hearing loss may be unable to hear doorbells and alarms, to respond while talking with anyone, etc. All this can make them feel frustrated, lonely, and depressed. It is the third most common chronic condition after arthritis and hypertensive diseases among elders.

Hearing loss can be improved by using the hearing aids. Hearing aids work well for some while for others; it may not be a perfect solution due to many reasons such as some people do not buy aids that meet their needs, incorrect amplification adjustments, low custom design, etc. In classics of Ayurveda this ailment has been described as karnabaadhirya under the heading of ear diseases. Karnapurana (Instillation of medicated oil into the external auditory canal) is one of the major treatments for ear diseases explained in classics. A case report of 65-year-old male who presented with complaints of reduced hearing and tinnitus in both ears has been presented here.

Keywords: Bilwa taila, karnabaadhirya, karnapurana, presbyacusis

INTRODUCTION:

Hearing impairment is the most frequent sensory deficit in human populations, affecting more than 278 million people in the world. In India, 63 million people (6.3%) suffer from significant auditory loss.[1] The prevalence of presbyacusis

rises with age, ranging from 25% to 40% of the population aged 65 years, 40-66% in patients older than 75 years, and more than 80% in patients older than 85 years.[2] Risk factors for presbyacusis include systemic diseases and poor habits that cause inner ear damage and lead to impaired hearing. Age, the male gender, diabetes mellitus, hypertension and hereditary hearing loss are all identified as risk factors. Poorly controlled hypertension or diabetes may pre-dispose to hearing impairment through the occurrence of chronic arteriosclerosis which in turn causes a reduction in the blood supply to the inner ear, as these are common chronic diseases among older adults. Hearing loss due to aging occurs from a combination of environmental and genetic factors. However, unfortunately, for various reasons the deafness has not drawn enough attention.

In the majority of presbyacusis cases, hearing loss develops as a consequence of degeneration of the inner ear, to be more precise the area of the inner ear containing microscopic blood vessels.

There are additional changes to hair cells accompanied by loss of these cells and further hearing problems.[3] Treatment for presbyacusis in the majority of cases includes appropriate hearing aids. This is only a partial solution of the problem. However, it has its own limitations and drawbacks. Untreated presbyacusis leads to social isolation, and depression, and may cause or worsen cognitive impairment and dementia.[4] In Ayurveda it can be taken as vaardhakyajanya baadhirya (senile deafness) one of the karnagata roga (ear disease) which is having the main symptom as reduced hearing.[5]

Most hearing loss is either due to the disturbance of vata dosha alone or vitiation of vata- kapha together. Here kapha vardhak aahar and vardhakya (senility) are the main etiological factors, which result in the vitiation of vata and kapha dosha. Vata vitiation can result in damage to the auditory nerve and nerve endings, which can lead to hearing loss and ringing in the ear.

When kapha is vitiated, the result is obstruction of the sound pathway. Finally, disturbances of vata as well as kapha can affect the auditory nerve resulting in degeneration of the end organs of hearing or obstructions to the flow of nerve impulses, ending in presbyacusis.

The main treatment of karnagata rogas is Karnapurana. As the root cause for karnagata rogas lies in the shabdavaha srotas and the dosha involved is vatadosha, hence the treatment of choice is karnapurana. Yogratnakar states that –Puranam

katutailam hitam vataghnameva cha‖[6] hence Karnapurana was selected as treatment of choice to combat the root cause of baadhirya (deafness).This case showed good results.

CASE REPORT

A 65-year-old male presented with the complaints of reduced hearing in both ears associated with occasional occurrence of tinnitus, since 1 years.

On examination

On local examination of the ear [Table 1] the pinna, external auditory canal and tympanic membrane were normal. On tuning fork test, air conduction and bone conduction were reduced, which interprets the low +ve Rinne. On pure tone audiometric examination, the case was diagnosed as moderately severe sensori-neural hearing loss. The patient was able to hear and understand on shouting loudly.

Table 1

Local examination of ear

EXTERNAL EAR	RIGHT SIDE	LEFT SIDE
SIZE	NORMAL	NORMAL
SHAPE	NORMAL	NORMAL
PREAURICULAR AREA	NORMAL	NORMAL
POSTAURICULAR AREA	NORMAL	NORMAL
EXTERNAL ACOUSTIC MEATUS	NAD	NAD
TYMPANIC MEMBRANE	INTACT	INTACT

Past History

Patient had taken hearing aid 1 year back but it was of no use.

Procedures administered to the patient

The patient was administered with Karnapurana once daily for 7 consecutive days [Figure 1]. The treatment was repeated after 7 days. The details of the procedures are described in Table 2.

Table 2

Poorva Karnapurana

Poorva karma	Abhyanga with tila tail (local massage)Swedan (sudation therapy)
Pradhan karma	Instilled 6 drops of bilwadi tail in both ear for 5 min.
Paschat karma	Stuff the ear with cotton to avoid direct exposure toward heat, cold, dust and wind

Pathya (Do's) - Advised to take laghu (light), supachya (easy to digest) and ushna (warm) ahaara, ghritapana (intake of ghee), wheat, rice, green gram, brinjal, drum stick, bitter gourd, bhrahmacharya (maintaining celibacy), alpa bhashana, etc., which pacifies the vatadosha.

Apathya (Dont's) - Advised not to take head bath, drink cold water or other drinks, clean ears, exposure to cold wind, exercise, brushing the teeth with sticks, etc., which leads to aggravation of vata dosha.

RESULTS:

The tinnitus was reduced and subjective improvement in hearing was observed by 1 months. The patient was able to hear sounds and understand words spoken loudly. The patient was advised to avoid exposure to loud noise. With a follow-up for a period of 1 month, the patient had a mild improvement in hearing. Meanwhile, he was prescribed oral medication of, Induvati one tablet twice daily, Ashwagandhadi churna 1tsp BD with milk and Karnapurana with bilwadi taila.

DISCUSSION:

Loss of hearing is one of the important causes of psychological trauma of the sensory losses and this is exactly how the deaf drowns in a sea of silence.[7] The degenerative changes that occur in the cells of organ of corti and nerve fibers result in a slow, progressive deafness which may be associated with tinnitus.[8]

Mode of action:

Karnaabhyanga (Massage of the ear)

Here for karnaabhyanga murchita tilataila (processed sesame seed oil) was used. Taila is having vyavayi, vikaasi, sukshma, vishada, guru and sara properties, ushna veerya and madhura vipaka. Hence mainly acts on vitiated vata dosha and pacifies it and normalizes its function.

As Tila taila is having brihana (~nourishing)[9] the nourishment of shravanendriya (ear) and to improve the hearing mechanism.

Bhashpa swedana (Sudation therapy)

Swedana karma by virtue of its properties like ushna, sara, snigdha, sukshma, and shtira, etc., aids quicker absorption of oil into the ear and helps in vata shamana (pacification of vata dosha), improves the blood circulation and gives strength to the ears.[10] These actions in turn help to improve auditory function.

Karnapurana (Instillation of medicated oil into external auditory canal)

The ears are said to be the seat of vata dosha and are responsible for hearing mechanism as quoted in Asthanga Hridaya –Pakwashaya katisakthi shrotasthi ……‖ –Buddhi hridayendriya chitta drik.[11]‖ The disease baadhirya occurs in ears is mainly due to vitiation of vata dosha. Karnapurana does the vatashamana and maintains the normal hearing capacity, as quoted told by Acharya Charaka –na karnarogaa vatottaha ……nochchai shrutihi na badiryam syannityam karma tarpanaat‖[12] Bilwataila was used for karnapurana. Bilwa exhibits ushna veerya and vatahara and kaphahara. action and helps restore vata dosha to normalcy. In one of the research works on leaf extract of Bilwa the results have shown the regeneration of damaged cells in pancreas.[13] Bhavaprakash Nighantu mentions that Bilwa exhibits action on nerves and hence is considered as a nadi balya (gives strength to nerves) drug.[14] Thus, it may be inferred that Bilwa may be helping in nourishment of the ear cells as well as regeneration of damaged cells in deafness.

Oral medication

Ashwagandhadi churna contains Ashwagandha, Yastimadhu, Haridra, and Rasna, which are used to heal and regenerate damaged nerve cells, thus improving the nerve function. Indu vati mainly contains Suvarna bhasma and Abhraka bhasma which are considered as immunemodulatory medicines, used to reduce the deleterious effects of stress and to boost the immune status of the body. These compounds exert a rasayana effect. As the patient was elderly, we gave rasayana drugs to improve rasa and rakta dhatus. This might have contributed in the early improvement in sensori neural hearing loss and prevented further deterioration of this condition. A correction of abnormalities in the body tissues indirectly helps in improvement in hearing by reducing the dysfunction of the inner ear.

This study shows that there is significant improvement in hearing mechanism and there were no adverse effects seen throughout the treatment. The mode of treatment was found to be effective, safe and easy to implement. Thus, this paper aims at presenting a treatment protocol mentioned in the Ayurvedic texts that is effective in treating the known cause of the condition and improving the functional integrity of ear.

REFERENCES:

1. Garg S, Chadha S, Malhotra S, Agarwal AK. Deafness: Burden, prevention and control in India. Natl Med J India. 2009;22:79–81. [PubMed] [Google Scholar]
2. Yueh B, Shapiro N, MacLean CH, Shekelle PG. Screening and management of adult hearing loss in primary care: Scientific review. JAMA. 2003;289:1976–85. [PubMed] [Google Scholar]
3. Age related hearing loss. 2012. [Last updated on 10th July]. Available Fromhttp://www.deafnessresearch.org.uk/content/your-hearing/main-types-of-hearing-loss/age- related-hearing-loss .
4. Dalton DS, Cruickshanks KJ, Klein BE, Klein R, Wiley TL, Nondahl DM. The impact of hearing loss on quality of life in older adults. Gerontologist. 2003;43:661–8. [PubMed] [Google Scholar]
5. Dwivedi R. Reprint ed. Ch. 12. Varanasi: Chaukhamba Krishnadas Academy; 2006. Shalakya Tantra (Nimi Tantra) Karna-Badirya Adhyaya; p. 397. [Google Scholar]
6. Shastri SB, editor. 8th ed. Verse 14. Varanasi: Chaukhamba Sanskrit Sansthan; 2004. Shastri SL, Commentator. Vidyotini Hindi Teeka on Yogaratnakara, Karnaroga Chikitsa; p. 314. [Google Scholar]
7. BS Tuli, Tuli IP, Singh AD, Tuli NK., editors. Ch 14-Deafness and various rehabilitative measures. 1st ed. New Delhi: Jaypee Brothers; 2005. Textbook of Ear, Nose, and Throat; p. 110. [Google Scholar]
8. Maqbool M. 8th ed. New Delhi: Jaypee Brothers; 1993. Text book of Ear, Nose, and Throat Diseases; p. 174. [Google Scholar]
9. Murthy S. 2nd ed. Ch. 45, Verse 112-113. Varanasi: Chaukhamba Surabharati Prakashan; 2004. Sushruta Samhita of Sushruta, Part-I, Sutra Sthana; p. 348. [Google Scholar]
10. Acharya YT. Part-I, Sutra Sthana. Reprint ed. Ch. 22, Verse 16. Varanasi: Chaukhamba Surabharati Prakashan; 2008. Charaka Samhita of Agnivesha. Revised by Charaka and Dridhabala with Ayurveda Dipika Hindi Commentary; p. 120. [Google Scholar]
11. Gupta A. Part-I, Vidyotini Hindi Commentary Sutrasthana. Reprint ed. Ch. 12, verse 1-4. Varanasi: Chaukhamba Sanskrit Sansthan; 2005. Asthanga Hridaya of Vaghbhata; p. 90. [Google Scholar]
12. Acharya YT. Part-I Sutra Sthana. Ch. 5, Verse 84. Varanasi: Chaukhamba Surabharati Prakashan; 2008. Charaka Samhita of Agnivesha, Revised by

Charaka and Dridhabala with Ayurveda Dipika Hindi Cmmentary; p. 42. [Google Scholar]
13. Das AV, Padayatti PS, Paulose CS. Effect of leaf extract of Aegle marmelos (L.) Correa ex Roxb. on histological and ultra structural changes in tissues of streptozotocin induced diabetic rats. Indian J Exp Biol. 1996;34:341–5. [PubMed] [Google Scholar]
14. Shastry JL. Vol. 2. Varanasi: Chaukhamba Orientalia; 2005. Illustrated Dravyaguna Vijnana; p. 111. [Google Scholar]

***

SENSORY NEURAL HEARING LOSS -A GERIATRIC DISEASE

Dr. Meenakshi Bhati

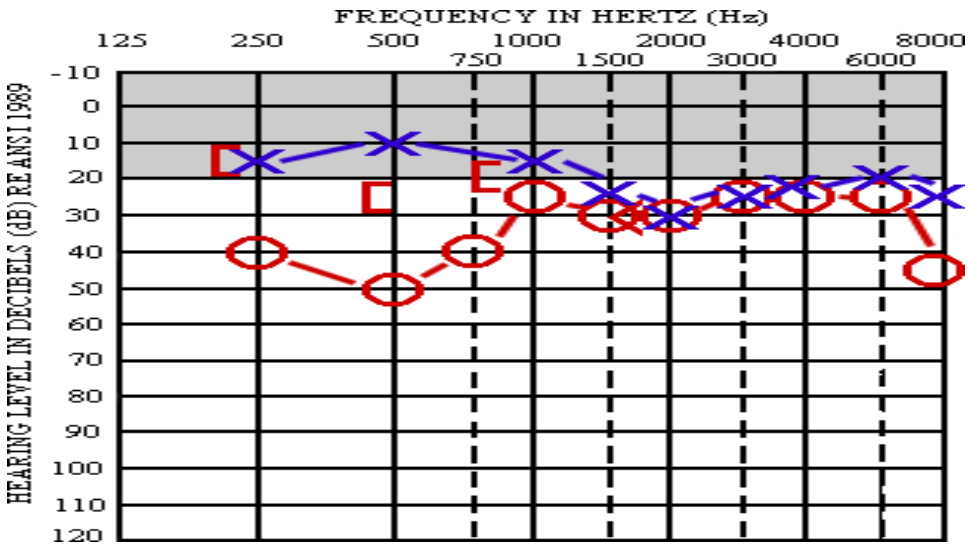
Final year, PG scholar, Dept. of Shalakya Tantra, PIA, Parul University, Limda, Vadodara.

—Hearing loss can be conductive, sensorineural, or mixed in origin.‖

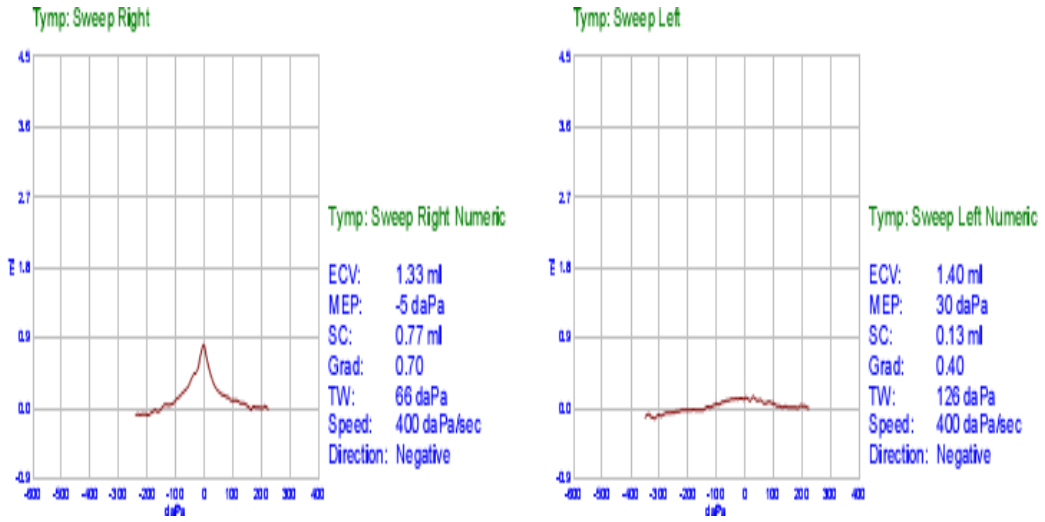
Ear is made up of three parts: The outer, the middle, and the inner ear. Sensorineural hearing loss, or SNHL, results from lesions of the cochlea. 8th nerve or central auditory pathways. From your inner ear to your brain can also cause SNHL. Soft sounds may be hard to hear. Even louder sounds may be unclear or may sound muffled. This is the most common type of permanent hearing loss. Most of the time, medicine or surgery cannot fix SNHL. Hearing aids may help you hear.

CHARACTERISTICS OF SENSORY NEURAL HEARING LOSS-:

- A positive Rinne test, AC> BC
- Weber laterlised to better ear.
- No gap between air and bone conduction curve on audiometry.
- There is difficulty in hearing in the presence of noise.
- Diagnosis is ordinarily made via observation of an "air-bone gap" on audiometric, meaning that hearing is superior when sound is transmitted in such a way that it bypasses the middle ear acicular chain. The air-bone gap (ABG) should be at least 10 db.



- Tympanometry usually is either flat (as shown below), or shows an abnormally large volume (indicating a perforation).



AETIOLOGY:

Congenital: It is present at birth and is the result of anomalies of the inner ear.

Acquired: It happens later in the life. The genetic hearing loss may manifest late and may affect only the hearing.

COMMON CAUSES:

Infection of labyrinth- Viral, bacterial, and Spirochetes.

Trauma to labyrinth or 8th nerve Fractures of temporal bone. Ototoxic drugs, presbycusis, meniere disease, autoimmune disorder, Sudden hearing loss, familial progressive SNHL, systemic disorder, multiple sclerosis, blood dyscrasias.

SPECIFIC FORMS OF HEARING LOSS:

Viral Labyrinthitis usually reach the inner ear by blood stream affecting stria vascularis and then the endolymph and organ of Corti .

Bacterial. Bacterial infection reach labyrinth through the middle ear or through CSF. Sensory neural hearing loss following meningitis is a well- known clinical entity.

Syphilitic : Sensory neural hearing loss is caused both by congenital and acquired Syphilis.

OTOTOXICITY: Aminoglycoside Antibiotics like streptomycin, gentamicin and tobramycin are primarily vestibulotoxic. Neomycin, kanamycin, amikacin, sisomycin are cochleotoxic. They cause selective destruction of outer hair cells, basal coil and progressive into cochlea.

DIAGNOSIS:

History: It is important to know whether disease is congenital or acquired, stationary or progressive, associated with other syndromes or not.

Severity of Deafness: This can be found out on audiometry.

Type: Audiogram whether loss is high frequency, low frequency, mild- frequency.

Site of Lesion: Cochlear, Retro cochlear or central.

Laboratory test: X- ray or CT scan of temporal bone for evidence of bone destruction, blood count, blood suger, thyroid function test.

MANAGEMENT

In SNHL is important as measure can be taken to stop its progress, reverse it or to start an early rehabilitation program. Syphilis of the inner ear is treatable with high doses of penicillin and steroids with improvement in hearing. Early management of meniere‘s disease can prevent further episodes of vertigo and hearing loss. SNHL due to perilymph fistula can be corrected surgically by sealing the fistula in the oval or round window with fat. Rehabilitation of hearing impaired with hearing aids and other device. In any specific disease like syphilis used steroids,

Vasodilator for particularly useful in meniere‘s disease Vitamins like B1,B6,B12 and Tranquilizers. Used for deafness and tinnitus.

Noise induced hearing loss can be prevented from further deterioration if the patient is removed from the noisy surroundings. Ototoxic drugs should be used with care and discontinued if causing hearing loss.

Conclusion: Sensory neural hearing loss is a age related hearing loss results from lesion of cochlea, 8 th nerve or Central auditory pathways.there are many causes like diuretics, ototoxic drugs topical ear drops which are other responsible factors.

REFERENCES-

- PL Dhingra, Diseases of Ear, Nose and Throat. Seventh Edition page no.31,34,35
- Dr. K.B Bhargava. T.M Shah E.N.T Disease

***

AYURVEDIC MANAGEMENT OF SNHL DUE TO DIABETES-A CASE STUDY

***Indu Sharma**

Corresponding and presenting author- assistant professor, Department of Shalakya Tantra, mjf ayurvedic college harota jaipur, Rajasthan (302002), India, T.P- 9461774024

****Shamsa Fiaz**

HOD, Department of Shalakya Tantra, National Institute of Ayurveda, Rajasthan (302002)

Introduction-

Diabetes mellitus is a chronic metabolic disorder characterized by hyperglycemia & alteration in fat & protein metabolism. One of its disabling complication is sensory neuropathy including hearing loss . As per *Ayurveda* classics this condition can be correlated with *Badhirya* which is the result of vitiated *Vata Dosha*[1-2] .Hearing loss is about twice as common in adults with diabetes compared to those who do not have the disease."Hearing loss may be an under-recognized complication of diabetes. As diabetes becomes more common, the disease may become a more significant contributor to hearing loss, people with diabetes should consider having their hearing tested. Morbidity in Diabetes Mellitus is mainly due to long term micro and macro vascular complications affecting blood vessels of eyes, kidneys, heart and nerves. Diabetes mellitus has been implicated as independent causative factor of sensorineural hearing loss. Diabetes is thought to be an important causative factor for SNHL.The pathogenesis involves oxidative stress, microangiopathy and auditory neuropathy.

WHO defines hearing impairment[3]

1. mild- threshold of 26-40 dB
2. moderate –threshold of 41-55 dB
3. moderately severe -threshold of 56-70 dB
4. severe -threshold of 71-90 dB and
5. profound

In *Badhirya* mainly vitiated *vata dosha* alone or along with *Kapha* goes in *Shabdavaha sira* / *strotas* because of that *margavrodh* occurs and leads to *Badhirya* In *Ayurveda*, the treatment regimens as per *Dosha* vitiation to be adopted are- *Ghritapana, Rasayana,* Avyaiyama, *Ashirasnana, Brahmacharya, Akatthana* . Among these, *Rasayana Chikitsa* has an important role in *Karnanada* along with *Karnapurana which* is an important procedure advocated for all *Karna Rogas*.

Case report-

A 62 year old female patient presented herself with the complaint reduced hearing in both ears associated with occasional occurrence of tinnitus since one year. She was also suffered of Diabetes Mellitus from last 4 years and is undermedication. She also had problem understanding speech especially if there was a lot of noise around

Examination-

- On local examination - pinna, external auditory canal and tympanic membrane were normal.
- On tuning fork test, (Rinne +ve) -AC>BC. (both reduced)
- On PTA examination- the case was diagnosed as moderately sensori-neural hearing loss, with hearing threshold level in both ears between 41-55 dB hearing loss .
- Routine investigations like Hb, TLC, DLC, ESR, and thyroid profile were within normal range
- FBS was increased 170

Treatment given

1. ***Karnapurana* with *Dashmoola Taila* -** It was advised for 3 sittings of 7 days with 5 days interval between each sitting.

   ***Poorva Karma* –** in this stage *Mridu Abhyanga* was done with *Dashmoola Taila* on the lateral surface of face and post auricular area followed by hot fomentation.

   ***Pradhana Karma* –** in this stage lukewarm *Dashmoola Taila* was filled in the external auditory canal for 10 to 15 min in each ear.

   ***Paschat Karma* –** in this stage oil from external auditory canal was removed and again hot fomentation was done on the lateral surface of face and post

auricular area. Patient was advised to avoid use of loud sounds, restricted use of mobile phone, avoid head phone, excessive cold water/drinks, spicy foods and exposure to cold environment.

2. ***Shamana Chikitsa*** **with -**

Sarivadi vati 2BDfor 2 month

Rasayana Yoga containing-

Ashwagandha churna - 2gm

Shatavari churna - 2 gm

Chopchini churna - 2 gm

It was advised with milk two times a day before meal for two months

Result - After two months of treatment, there was remarkable improvement in the complaint of SNHL Audiomerty improvement.It became mild hearing loss (threshold of 26-40 dB). The tinnitus was reduced. Subjective improvement in hearing was observed. There were no side effects observed during the treatment as well as after the completion of treatment.

Discussion:

Karnaabhyanga:

Karnaabhyanga was done with *Dashmoola taila* which is having *Vavayi*, *vikaasi*, *sukshma*, *vishada*, *guru* and *sara* properties, *ushna veerya* and *madhura vipaka*. Hence mainly acts on vitiated *Vata Dosha* and pacifies it and normalizes its function. As *Taila* is having *Brimhana* property, thus nourishes *Shravanendriya* (ear) and small blood vessels of inner ear and helps to improve the symptoms of tinnitus.

Karnapurana

Dashmoola Taila was used for *Karnapurana* which exhibits *Ushna Veerya* and *Vatahara* and *Kaphahara* action and helps restore *Vata Dosha* to normalcy. It is *Kaphavataghna*, *Shothahara*, *Vedanasthapana* and having *Rasayana* action. It improves microcirculation to inner ear and auditotory cortex .It is hypothesized that *Dashmoola Taila* helps in the absorption through epithelial tissue of external ear canal and tympanic membrane that can maintain normal function of hearing and equilibrium. *Karna Poorana* with *Dashmoola Taila* which is having

Vatahara properties and anti ototoxic property subsides the vitiated *Vata dosha* in *karna srotas*

Oral medication

Rasayan Yoga contains *Ashwagandha*, *Satavari* and *Chopchini*, which are used to heal and regenerate the damaged nerve cells, thus improving nerve function. According to *Bhavaprakash, Aswagandha, Satavari* have *Rasayana* effect and *Chopchini* is effective in all types of *Vataja* disorders. According to *Priyavrat Sharma, Aswagandha* eliminates *Vata Kapha*, *Satavari* eliminates *Vata Pitta* and *Chopchini* is known to eliminate[4] *Tridosha* in the body. All the drugs are having *Rasayana*, *Balya* and *Brumhana* properties thus it can prevent age related degenerative changes in the inner ear. *Ashwagandha* is a known adaptogenic which increases the ability to withstand all types of stress. All these properties help in improving the blood supply of the inner ear and reduce the acuity of the SNHL and tinnitus felt by the patient. *Ashwagandha* stabilizes the blood sugar and lowers the cholesterol and it is also helps to produce insulin by checking pancreatic beta cell damage.*Ashwagandha* is a great antidote to stress and a vehcile for delivering vitality to the body .*Shatavri* significatly decreased cholesterol and blood sugar levels and reduced oxidative stress[5].

This formulation also improves the functions of cochlea and promotes hearing capacity, overall health and strengthens the immunity. *Sarivadi vati* helps to treat tinnitus and hearing loss , ear infection. It is also used to treat diabetes, bleeding disease etc.

Conclusion

This case study revealed that patient of SNHL with Diabetes can gain significant relief through *Ayurveda* management. Also it can be concluded that this line of treatment enhances the speed of recovery with minimal risk and high patient acceptance in preference to other methods of treatment. Blood sugar level was monitored during the trail. Despite the limitations of this case study, the therapy may be an effective option in the treatment of SNHL Further study should be carried out in larger sample group.

REFERENCE:

1. Sushruta. Sushruta Samhita with nibandha samgrah commentary of Dalhana. Varanasi; Chaukhambha Orientalia; 2009. 643p.
2. Sushruta. Sushruta Samhita with nibandha samgrah commentary of Dalhana. Varanasi; Chaukhambha Orientalia; 2009. 643p.
3. Dhingra P H and Shruti Dhingra, Diseases of Ear, Nose and Throat, 7th edition, Elsevier, India, p
4. Chunekar KC. Bhavprakash Nighantu of Bhavamisra Reprint ed. Guduchayadi varga Verse 189-190. Varansi: Chaukhambha Bharati Academy ;2002
5. Sharma PV. Dravyaguna Vijnana Vol. II, Reprent ed. Varansi: Chaukhambha Bharati Academy ;2009

***

GLAUCOMA: A PRINCIPAL REASON OF BLINDNESS IN SENIOR PEOPLE

Dr. JAYAVARMAN.R

1st Year Pg Scholar

Shalakya Tantra Department

Parul Institute Of Ayurved Parul University

ABSTRACT:

Ageing is the process of losing physical and mental balance of an individual. The age plays an important factorin many aspects especially susceptibility toward many diseases. Most of the early adult‘s faces eye and ear related problems along with increasing age. In this article an author is trying to focus on eye related problems. The medical conditions such as deceased vision, blockage of inner eye vessels, and inflammation in the eye, eye surgery, and autoimmune disease of eyes are responsible for causing the severe blindness disease like glaucoma. The high risk factors such as poor vision, intraocular pressure, diabetes, thinner corneas, high blood pressure and eye pressure, sickle cell anemia, farsight and nearsight, family history of glaucoma are involved as glaucoma causing agents in many cases. As per the current research, there is no any effective treatment for glaucoma across the world. So the finding of effective treatment against the glaucoma becomes challenge to the researchers throughout the globe.

Keywords: Age; Glaucoma; Primary Open-Angle Glaucoma (POAG); Elderly adults

INTRODUCTION:

The process of ageing brings most of the risk factors in the life of older adult. The age plays important factors in susceptibility towards the glaucoma. The affected individuals are classified based on the age of peoples like congenital (<2 years), juvenile (2 to <18 years), late juvenile (18 to <40 years), and early adult (40 to <45 years). The glaucoma shows one of the major risk factor leads to cause the blindness among the peoples over the age of 40 i.e., early adults. Glaucoma is caused due to the damage of optic nerve of eye‘s which carries signal from eye to brain responsible for sending image to brain. Due to hidden or undetectable symptoms the glaucoma is also known as ―Silent thief of sight‖ [1]. Sometimes it

also associated with hearing loss. In case of hearing loss association with glaucoma the higher prevalence of antiphosphatidylserine antibodies of the IgG antibodies were seen in normal-tension glaucoma patients [2].

Causes of Glaucoma:

It can be caused due to the severe eye infection, blockage of inner eye vessels, inflammation in the eye, chemical injury to the eye, eye surgery, decreased supply of neutrophine, oxidative stress,excitotoxicity and the involvement of auto immune response may cause glaucoma.

Risk factors:

It may likely to get in the following conditions such as age, poor vision, intraocular pressure, diabetes, thinner corneas, high blood pressure and eye pressure, sickle cell anemia, persons with farsight and nearsight, sometimes it is hereditary.

Types of glaucoma:

The glaucoma has two types namely open-angle glaucoma and narrow angle glaucoma. The angle itself refers to the drainage of angle inside the eye. The angle controls external flow of aqueous fluid from the eye due to neuro-optical damage the optic angle fails to complete its functions [3]. As per the study of Kreft about 44.7 million suffered from Primary Open-Angle Glaucoma (POAG) and 4.5 million peoples were blind across the world in 2010 while in 2017 about 57.5 million people across the world were affected by the POAG [4].

Treatment:

The classical treatment used for delaying the progression of glaucoma is surgically or medically lowering the intraocular pressure but still finding of effective treatment against the glaucoma becomes challenge [5]. So many of the researchers across the world are spending their efforts to overcome the world second most blindness causing disease.

CONCLUSION:

The high risk factors such as poor vision, intraocular pressure,diabetes, thinner corneas, high blood pressure and eye pressure, sickle cell anemia, farsight and nearsight, family history of glaucomaare involved as glaucoma causing agents in many cases. As per the current research, there is no any effective treatment for glaucoma across the world. So the finding of effective treatment against the glaucoma becomes challenge to the researchers throughout the globe.

ARMD – AGE RELATED MACULAR DEGENERATION

DR. KRUNAL B PATEL

1st Year Pg Scholar

Shalakya Tantra Department

Parul Institute Of Ayurved Parul University

INTRODUCTION :

Age-related macular degeneration (ARMD) is a disease of the retina that usually develops in people aged 60 years and older. Age-related macular degeneration is a common, chronic and progressive degenerative disorder of the macula that affects older individuals and features loss of central vision as a result of abnormalities in the photoreceptor/retinal pigment epithelium often result in in geographic atrophy or neovascularization.

CAUSE OF ARMD :

- Age
- Smoking
- Obesity
- Cardiovascular Diseases
- Abnormal blood vessels that leak blood or fluid in to macula.

SIGN AND SYMPTOMS:

AMD affects the macula So-

- Blurring of vision is main symptoms.
- Inability to see in dim vision.
- Seeing Spots.
- Abnormality where straight line seen wavy.
- Difficulty in recognizing faces.
- Decrease intensity and brightness of colour.

RISK FACTOR :

Risk factors for ARMD may be broadly classified into personal or environmental factors (e.g., smoking, sunlight exposure, and nutritional factors including micronutrients and alcohol consumption)

TYPES OF ARMD :

There is 2 types od ARMD :

Dry and Wet. Dry ARMD is less common. wet ARMD is more advance disease state and is associated with rapid distortion and suddon loss of vision.

INVESTIGATION :

- Annual eye examination
- Amlser Grid to test central vision.
- OCT Test.

COMPLICATION:

- Due to Central loss of vision higher risk of depression and social isolation.
- Vissual hallucination.

TREATMENT :

- A Special combination vitamins and minerals. It reduce progression.
- Fish intake – Omega-3 Fatty acid found in it.
- Diet which is rich in Fruits and vegetables-Contain Antioxidents.
- Maintain healthy weight and exercise regularly.

***

TINNITUS

Dr. Monika Singh.
Final year PG Scholar.
SKGAC, kurukshetra.
Guided by
Dr. Devendra khuraa
Dr. P.C.Mangal

Introduction :

- Tinnitus is the perception of sound when no corresponding external sound is present. Nearly everyone will experience a faint normal tinnitus in a completely quiet room but it is only of concern if it is bothersome or interfers with normal hearing or correlated with other problems. While often described as a ringing ,it may also sound like a clicking,buzzing,hiss or roaring.

Prevalence rate of tinnitus:

- Tinnitus is a common problem for millions of people ,epidemiologic studies have reported its prevalence to range in from 8% to 25.3%of the US population. Population-based studies conducted in other nations have found a similar prevalence of tinnitus ,ranging from 4.6% to 30%.

Causes:

- Its particularly related to ageing(presbyacusis).
- Exposure to noise
- Presence of ear wax
- Head injury
- Stress
- Ear infections
- Meniers disease
- Some medication such as aspirin

- Overactive thyroid gland or anaemia
- Tinnitus that occurs in only one ear should be taken more seriously as it may be caused by an acoustic neuroma.

The symptoms of tinnitus can affect different ways,and severity of the noises that are heard can range from mild to severe.

Symptoms:

- A sound of crickets or roaring,buzzing,hissing,whistling,and high-pitched ringing.clicking or pulsatile tinnitus (the noise accompaniesyour heartbeat)

Types:

- Subjective tinnitus,meaning that you hear a sound but it cannot be heared by others.
- Objective tinnitus,meaning your doctor may sometimes actually hear a sound when he or she is carefully listening for it.

Diagnosis :

- Hearing (audiological) exam. During the test, you'll sit in a soundproof room wearing earphones that transmit specific sounds into one ear at a time. You'll indicate when you can hear the sound, and your results will be compared with results considered normal for your age. This can help rule out or identify possible causes of tinnitus.
- Movement. Your doctor may ask you to move your eyes, clench your jaw, or move your neck, arms and legs. If your tinnitus changes or worsens, it may help identify an underlying disorder that needs treatment.
- Imaging tests. Depending on the suspected cause of your tinnitus, you may need imaging tests such as CT or MRI scans.
- Lab tests. Your doctor may draw blood to check for anemia, thyroid problems, heart disease or vitamin deficiencies.
- Do your best to describe for your doctor what kind of tinnitus noises you hear. The sounds you hear can help your doctor identify a possible underlying cause.
- Clicking. This type of sound suggests that muscle contractions in and around your ear might be the cause of your tinnitus.

- Pulsing, rushing or humming. These sounds usually stem from blood vessel (vascular) causes, such as high blood pressure, and you may notice them when you exercise or change positions, such as when you lie down or stand up.
- Low-pitched ringing. This type of sound may point to ear canal blockages, Meniere's disease or stiff inner ear bones (otosclerosis).
- High-pitched ringing. This is the most commonly heard tinnitus sound. Likely causes include loud noise exposure, hearing loss or medications. Acoustic neuroma can cause continuous, high-pitched ringing in one ear.

Treatment :

- Since tinnitus can be caused by a wide variety of different health conditions, the treatment that is recommended will depend on the underlying cause.
- For example,if caused by a severe or long term ear infection,antibiotics may be prescribed.if by a build up of ear wax,then ear drops or ear irrigation is recommended.
- However in most cases of tinnitus,there is no cure and so treatment is aimed at managing the symptom on a day –to-day basis.
- **Objective tinnitus:**

  Gamma knife radiosurgery(glomus jugulare) Shielding of cochlea by Teflon implant Botulinum toxin(palatal tremor)

  Clearing ear canal Using a neurostimulator
- **Subjective tinnitus:**

Drug and nutrients: Lidocaine,niacin,benzodiazepines(lorazepam,clonazopam)

Electrical stimulation:

Transcranial magnetic stimulation Transcutaneous electrical nerve stimulation

Surgery:

Repair of perilymph fistula

External sound:

Tinnitus masker

Psychological:

Cognitive-behavioral therapy

Self help remedies:

Relaxation: stress can make your tinnitus worse.regular exercise such as yoga,may help you relax.

Listening to the music: calming music and sounds may also help you to relax and fall slep at bed time.

Sound generators: these are also known as white noise generators or tinnitus markers.they may be useful for drowning out the sound of tinnitus.

Hearing aids: if you have hearing loss,using a hearing aid may help with your tinnitus.this is because hearing sounds that you would not otherwise be able to hear may help override the tinnitus noise.

Comprehensive laser rehabilitation therapy of tinnitus:

Irradiation points:

Procesus mastoideus aiming in the direction of contra-lateral orbit. Meatus acusticus externus in the direction of the acoustic duct.

2-3 times a week.

8-10 applications in total. 4-6 weeks break.

***

ROLE OF SHATAVARI (ASPARAGUS RACEMOSUS) AS A VERSATILE TONIC IN MENOPAUSAL DRY EYES - A REVIEW

Dr Neena Ravindran [1] Dr K Sivabalaji [2] Dr Ashwini B N [2]

First year PG Scholar [1], Associate Professor [2],

Department of Salakyathantra,

Amrita School of Ayurveda, Kollam, Kerala

Email id: drneenasabarish@gmail.com

Ph: 08157989211

Introduction:

Menopause is a natural biological process of a female body. Onset from early 40s depending up on the familial history and exhibit symptoms ranging from hot flashes to emotional imbalances. Menopause can also affect women under the age of 40 years. However, it is a rare condition. Premature menopause can be spontaneous or induced. Induced premature menopause is the result of medical interventions such as chemotherapy or surgical interventions such as bilateral oophorectomy. Regardless of cause, women who experience oestrogen deficiency at an early age before the natural menopause are now recognized to be at increased risk for premature morbidity and mortality. There are many effective treatments available to cope up the symptoms, from lifestyle modifications to hormone therapy and have been noted effective. Among menopausal related conditions, dry eye is a very common symptom consulted by an Ophthalmologist. Menopausal women with comorbidities are at a greater risk for developing dry eye and subsequent negative effects on their overall eye health. The prevalence of dry eye in patients with symptoms of dry eye was 88% and without symptoms was 30.4%. Incidence of Dry eye disease in women over 50 years old is nearly double than that in men over 50 due to hormonal aetiology. Various factors like derangement in hormonal balance, feedback mechanisms and changes in receptor receptivity interplay to alter the homeostasis of the ocular surface and results in Dry eye. Dry eye disease is a symptom complex which affects the quality of life occurring as a ramification of abnormalities of a tear film. The patient narrates about burning and

foreign body sensation, reduced vision and hampering the daily activities. According to International Dry eye workshop, Dry eye disease is defined as ‒a multifactorial disease of the tears and ocular surface that results in symptoms of discomfort, visual disturbance, and tear film instability with potential damage to the ocular surface. It is accompanied by increased osmolarity of the tear film and inflammation of the ocular surface‖. There is higher incidence of dry disease in post-menopausal women. Due to high prevalence and its effects on the ocular well-being, it is important to address the condition thereby can improve the quality of life of an individual.

Ayurveda offers a holistic approach to health treating the body as a whole unlike other medical system. Hence, the concepts of agni, dosha and dhatu saamyata is crucial. Adding on Jara avastha and vaardhakya also should be taken into account. Dry eyes can be considered as Shushkashipaka and similar line of management can be adopted. The treatment also should address the hormonal derangement. This article, it paves a gateway to the holistic approach to menopausal dry eye where Shatavari can act both as a versatile female tonic as well as a chakshushya dravya.

Material and methods: Brihattrayis and laghutrayis are referred to compile and analyse age related eye conditions and the properties of shatavari. Peer revived journals for researches related to menopausal dry eyes and shatavari (Asparagus racemosus)

Discussion:

Effects of Sex hormones maintaining the stability of Tear film:

Tear film relies on the normal production of the constituents that comprises each of its three nominal layers: Outer lipid layer secreted by meibomian glands, middle aqueous layer secreted by lacrimal and accessory lacrimal glands and the inner mucin layer secreted by goblet cell. Homeostatsis is maintained through neuronal and hormonal mechanisms. Disruption of this functional unit can result for many ocular surface diseases including dry eye. Both androgens and estrogens effect on the synthesis and components of tear film and also sex hormone influences on immune system suggests that estrogen can modulate a cascade of inflammatory events which underlie dry eye. Estrogen appear to promote inflammatory process in the meibomian gland, the ocular surface epithelia and possibly the lacrimal gland; however, the role of estrogen in dry eye is complex and remains unsolved. Increased levels of estradiol (an estrogen steroid hormone) are also a risk factor for

dry eye. Loss of androgen support to the meibomian and lacrimal glands reduce the volume and stability of pre-ocular tears which intern reduce the rate of tear turnover, increasing tear osmolarity and prolonged exposure of the ocular surfaces to debris and microorganisms.

Clinical Considerations in Menopausal Dry Eye:

Clinically, patients present with symptoms of dryness, burning, blurred vision, tearing and light sensitivity. Medical history, surgical history, concurrent medications, environmental exposures to allergens, smoking need to be evaluated to identify potential contributing factors. On ophthalmic examination, decreased tear lake with increased tear breakup time is seen. Corneal surface staining is seen on slit-lamp bimicroscopy. Schirmer's test shows decreased tear production in aqueous deficiency. Increased tear osmolarity and decreased levels of lactoferrin and lysozyme are seen.

Current available treatments:

First line of treatment for dry eye is lubricating eye drops. If ineffective, second line of treatment includes anti-inflammatory medications such as steroid eye drops and immunomodulatory eye drops such as cyclosporine. In severe cases, depending on underlying cause, punctal occlusion, eyelid corrective surgery, and interventions such as scleral contact lenses and autologous serum tears may be indicated.

In menopause-related dry eye, role of hormonal therapy has been investigated and may play a potential role in treatment. Hormone replacement therapy is indicated to overcome these problems but there is increased risk of endometrial cancer, breast cancer, venous thromboembolic diseases, coronary heart diseases, dementia, alzheimers etc.

Shatavari a wonder drug for women:

Shatavari is described in all the Ayurveda classical text books. Shatavari (Asparagus racemosus) belongs to Liliaceae family and it is a climbing plant consisting of tuberous roots. It is one of the most important medicinal plant regarded as a ‗Rasayana' which means plant drugs promoting general well-being by increasing cellular vitality and resistance. According to Caraka Samhita, Satavari is Balya, Vayasthapana and belongs toMadhura skandhas. According to Susrutha Samhita, it belongs to Vidarigandhadi and Kantaka panchamoola gana. Properties of Satavari is guru, snigdha, madhura rasa, madhura vipaka, sheetha veerya, vata pitta samaka, chakshushya, nayana amayahara, medhya, agnivardhaka,

balya and jeevaneeya. It has antioxidant action and also it can regularise the hormonal imbalance and soothens the systemic dryness.

In women, Shatavari is a wonderful herb that support women in different stages of one‘s life. Previous research works have shown the action of shatavri as an estrogen regulator and can cope up with the post-menopausal symptoms like mood swings, dryness and other hormonal issues. Satavari is rich in estrogen supplements so that its administration in post-menopausal condition helps to prevent the hormonal imbalance, thereby reduces the post-menopausal symptoms. Even though HRT is widely practiced, the overall effect of hormone deficiency is not completely reverted. Therefore, women are turning in to natural medicine by using formulations of Shatavari, in an attempt to have a safe alternative to synthetic steroidal hormones. Shatavari being a known source of phytoestrogenic compounds that bind to estradiol receptor, and may therefore benefit postmenopausal women. Shatavari payasa is chakshushya and it is indicated as pathya in netra rogas by Susrutha acharya in Drishtiroga prathishedam adhyaayam, which means its usage prevents from eye diseases.

Jaravastha and Shushkashi paka is a vata predominant condition. Shatavari is vata-pitta shamaka, balya, medhya, rasayana, pushtidayaka in nature. So, it will be highly beneficial in geriatric related health issues. Considering all these qualities of Shatavari, it can be a best choice of drug in post-menopausal dry eye.

Additionally, Satavari can be administered in the form of Swarasa, Ksheerapaka, Choorna, Gritha and Gulam. These formulations can be taken without any palatable issues and so that the patient can use it on daily basis for the reversal of the symptoms of post-menopausal condition, progression and prevention of the same.

Conclusion:

Menopausal dry eye is not merely an ocular surface disorder, rather this is one of the manifestations of the deranged hormones. Shuskakshipaka is vata predominant condition and also vata dosha dominates in geriatric population. Shatavari is a Madhura skanda drug which can address both and also gives rasayana effect thereby nourishing the dhatus. It is rich in phytoestrogen, thus replaces the deficient hormones. Shatavari is Nethra pathya which can be administered in different forms and can be adopted as pathya easily. Thus, shatavari can be single drug therapy for menopause related symptoms and also menopausal dry eye.

CATARACT

Dr. Neha

Final Year Pg

Dept. Of Shalakya Tantra

PARUL INSTITUTE OF AYURVEDA

PARUL UNIVERSITY LIMDA VADODARA GUJARAT

INTRODUCTION:

A cataract is a dense, cloudy area that forms in the lens of the eye. Development of an opacity in the lens is called cataract. A cataract begins when proteins in the eye form clumps that prevent the lens from sending clear images to the retina. The retina works by converting the light that comes through the lens into signals. It sends the signals to the optic nerve, which carries them to the brain.

It develops slowly and eventually interferes with your vision. You might end up with cataracts in both eyes, but they usually don‘t form at the same time.

Cataracts are common in older people. Over half of people in the United States have cataracts or have undergone cataract surgery by the time they‘re 80 years old.

Symptoms of Cataracts:

Common symptoms of cataracts include:

- Blurring of vision.
- Trouble seeing at night.
- Seeing colors as faded.
- Increased sensitivity to glare.
- Halos surrounding lights.
- Double vision in the affected eye.
- A need for frequent changes in prescription glasses.

What Causes Cataracts?

There are several underlying causes of cataracts. These include:

- An overproduction of oxidants, which are oxygen molecules that have been chemically altered due to normal daily life.
- Smoking.
- Ultraviolet radiation.
- The long-term use of steroids and other medications.
- Certain diseases, such as diabetes.
- Trauma.
- Radiation therapy.
- Age related the most common.
- Eye inflammation or disease.

Types of Cataracts:

There are different types of cataracts. They are classified based on where and how they develop in your eye.

- Nuclear cataracts form in the middle of the lens and cause the nucleus, or the center, to become yellow or brown.
- Cortical cataracts are wedge-shaped and form around the edges of the nucleus.
- Posterior capsular cataracts form faster than the other two types and affect the back of the lens.
- Congenital cataracts, which are present at birth or form during a baby‘s first year, are less common than age-related cataracts.
- Secondary cataracts are caused by disease or medications. Diseases that are linked with the development of cataracts include glaucoma and diabetes. The use of the steroid prednisone and other medications can sometimes lead to cataracts.
- Traumatic cataracts develop after an injury to the eye, but it can take several years for this to happen.

- Radiation cataracts can form after a person undergoes radiation treatment for cancer.

Risk Factors of Cataracts

Risk factors associated with cataracts include:

- Older age
- Heavy alcohol use
- Smoking
- Obesity
- High blood pressure.
- Previous eye injuries.
- A family history of cataracts.
- Too much sun exposure.
- Diabetes
- Exposure to radiation from X-rays and cancer treatments.

Diagnosing Cataracts

Your doctor will perform a comprehensive eye exam to check for cataracts and to assess your vision. This will include an eye chart test to check your vision at different distances and Tonometry to measure your eye pressure.

The most common Tonometry test uses a painless puff of air to flatten your cornea and test your eye pressure. Your doctor will also put drops in your eyes to make your pupils bigger. This makes it easier to check the optic nerve and retina at the back of your eye for damage.

Other tests your doctor might perform include checking your sensitivity to glare and your perception of colours.

Treatment of Cataracts

If you‘re unable or uninterested in surgery, your doctor may be able to help you manage your symptoms. They may suggest stronger eyeglasses, magnifying lenses, or sunglasses with an anti-glare coating.

Surgery

Surgery is recommended when cataracts prevent you from going about your daily activities, such as reading or driving. It‘s also performed when cataracts interfere with the treatment of other eye problems.

One surgical method, known as Phacoemulsification, involves the use of ultrasound waves to break the lens apart and remove the pieces.

Extracapsular surgery involves removing the cloudy part of the lens through a long incision in the cornea. After surgery, an artificial intraocular lens is placed where the natural lens was.

Intracapsular cataract extraction with anterior chamber intraocular lens implantation.

Small incision cataract surgery involves removing the cloudy parts of surgery.

Surgery to remove a cataract is generally very safe and has a high success rate. Some of the risks of cataract surgery include infection, bleeding, retinal detachment, though incidences of all those complications are less than 1%. Most people can go home the same day as their surgery.

Prevention of Cataracts

To reduce your risk of developing cataracts:

- Protect your eyes from UVB rays by wearing sunglasses outside
- Have regular eye exams
- Stop smoking
- Eat fruits and vegetables that contain antioxidants
- Maintain a healthy weight
- Keep diabetes and other medical conditions in check

***

EDENTULISM-A GERIATRIC DENTAL DISEASE

Dr. Nimmi. A N

1st year PG Scholar, Department of Swasthavritta,

JSS Ayurveda college, Mysuru, Karnataka

INTRODUCTION:

Edentulism (partial or total) is an indicator of the oral health of a population. It may also be a reflection of the success or preventive and treatment modalities put in place by the health care delivery system, since it has being described as the "final marker of disease burden for oral heath. Complete edentulism can be defined as the physical state of the jaw following removal of all erupted teeth and the condition of the supporting structures available for reconstructive replacement therapies Edentulism has being described as irreversible and a major form of management is DENTURE WEAR.

GERONDONTOLOGY

Gerondontology: is the branch of dentistry that deals with the oral health problems of the old people. one of the problems of aging is that some of the bodily functions do not maintain their efficiency.There are lots of oral health problems associated with aging, edentulous or not ranging from root caries, Gingivitis, Periodontitis, xerostomia, candidiasis to list a few.Complete edentulism only aggravate some and in some cases, introduce new ones.

PROBLEMS ASSOCIATED WITH AGING IN COMPLETE EDENTULOUS PEOPLE

EXTRA-ORAL CHANGES

Skin becomes thin, wrinkled and dried

Lip age reduces the concavity and pout of the upper lip

Naso-labial groove deepens, which produce a sagging look to the middle third of the face.

Fat pads atrophy at subcutaneous end buccal pads of fat hollows the cheeks due to loss of fat, support for the pre symphysial pad of fat disappears and upper lip droops over maxillary teeth

INTRA ORAL CHANGES

Oral mucosa becomes thin, easily abraded, and frequently reacts unfavorably to the pressure of dentures.

Mandibular ridge resorption:

The reduction in mandibular height has a linear relationship to age. The Early mean % reduction in mandibular height was followed by slower mean resorption as the period of edentulism increased in both age groups

In older age groups, the progression of mandibular resorption in relationship to edentulism period was faster than in the younger age groups. A constant % reduction of mandibular height occurs as length of edentulism period increases

MANAGEMENT

Dentures, also known as false teeth, are prosthetic devices constructed to replace missing teeth; they are supported by the surrounding soft and hard tissues of the oral cavity.

Although the rate of edentulism will have decreased, the aging population will bring with it an increase in number of teeth loss.

Normal facial contours got restored with dentures. The advent of denture has helped with lots of complications associated with the edentulous state.

Among the complications associated with edentulism complete denture has helped with include:Mastication , Aesthetics , Pronunciation , Self-esteem.

However, denture wear has not come without its own related problems.

Excessive Salivation: In the first 12 to 24 hours of wearing denture, the patient face the problem of excessive salivation as the brain misinterprets it to be food.

Sore spots as they compress the denture bearing soft tissue (mucosa) may also arise eating and speaking difficulty . With adaptation and few denture adjustments in the days following insertion of the dentures can take care of this problems.

PROBLEMS ASSOCIATED WITH COMPLETE DENTURE WEAR WITH AGING

EXTRA ORAL CHANGES

Wrinkles above/ around lips or at corners of mouth: Denture has moved back and no longer supports the lips. This may be due to bone loss/ loss of skin elasticity

Angular cheilitis: loss of vertical support for the denture (bone loss) can cause mouth to over close. This can change the way the leaps seal together and cause saliva to pool at the corners of the mouth. The excess moisture in this area may cause the skin to become irritated and man increase fungi infection

ORAL MUCOSA becomes thin, easily abraded, and frequently reacts unfavorably to the pressure of dentures sometimes leading to sore spot in the mouth stomatitis and are other the mild mucosal inflammations lesions encountered most frequently in older edentulous mouths, especially of older men who wear dentures, smoke tobaccos and drink alcohol excessively.

Some Harmful Ingredients In Daily Used Modern Toothpaste

Sodium lauryl sulfate-in toothpastes which act as foaming agent-significantly increased the incidence of desquamation of the oral mucosa & recurrent apthous ulcer.

Exposure to high doses of triclosan has been linked to health issues like bacteria resistance, hormone issues and gut health disruption.It can accumulate in the bristles of toothbrushes and other parts of the toothbrush head.

Not just triclosan, but artificial colours,preservatives ,parabens in toothpaste can easily breach oral mucosa especially when a person has mouth ulcers. Parabens mimic the hormone oestrogen & can potentially cause reproductive issues.

Other toxic ingredients commonly found are fluoride[cause permanent tooth discolouration especially in young children],saccharin and aspartame [linked with Alzheimer‘s, diabetes etc..

PREVENTION OF EDENTULISM

The main cause of dental caries is the prolonged contact of teeth with food stuff accumulated between teeth along with certain microorganism- Kashaya+katu+tikta dravyas used for danta dhavana helps to reduce dental decaying and improves the hygiene in between the teeth. Further nimba, karanja etc poses antimicrobial activity.

The rasa used for dantadhavana also poses ropana property, which helps to control disorders of periodontal,prevents cavities, gum diseases, including gingivitis, and periodontitis.

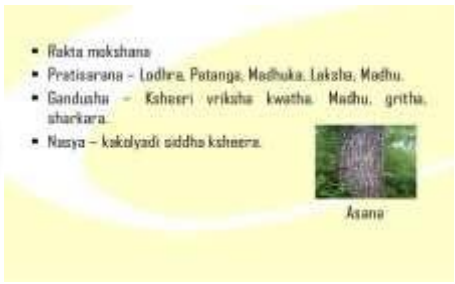
One among the deterious effects of bad oral hygiene eg:-Pyorrhoea alveolaris which can cause- premature fall of teeth

By doing *Danta dhavana*, oral health is maintained which in turn improve general health.

Hence, Taila gandusha should be employed to cure *Kanta-Asya Shosha,Oshta Sputana,Hanu-Manyagraha* , Decay of teeth [so that it aids in stronger teeth roots, for Toothache and Hyper sensitivity. Along with this, regular *Pratimarsha Nasya*, *Kavala*, *Prayogika Dhoompana*, *Mugha Abhyanga* helps to strengthen the teeth, gum and jaw by improving blood circulation and nourishment.

CONCLUSION

Ethics of ideal dentistry is to prevent the dental disorders and restore the dentures in its native form.The proper application of Dinacharya explained in Ayurvedic classics plays a major role in preventing oral cavity diseases.Lack of anesthetic agents is a major lacuna in executing surgical procedures in danta and danta moolagata rogas as explained in classics.



- Rakta mokshana
- Lepa – Lodhra, Musta, Rasanjan.
- Gandusha – Ksheeri kwatha
- Nasya – Sariva, utpala, Yastimadhu, Lodhra, Agaru, Chandana siddha ksheera and gritha.

Karaveera

***

ROLE OF VASAKADI KWATH IN DIABETIC RETINAL HEMORRHAGES—A CASE STUDY

Dr. Pratibha Upadhyay,

associate professor mjf ayurvedic college harota jaipur, Dr.Shamsa Fiaz, Asso.Proff & Head, *Shalakya Tantra* NIA, Jaipur.

Introduction-

As eyes are the gateways of external world, visual defects tatamount to the obliteration of the world. The diseases of eye are classified vividly in *Susruta Samhita* among which as per pathological site one group of eye disease known as *Dristigata roga*, (diseases of visual impairment).Among these diseases, *Timira* involving *patala* (layers of retina) is considered to be the most important and serious as far as its prognosis and treatment is considered. If it is not treated in time it leads to total blindness, *Timira* simulates to refractive error, presbyopia, cataract, vitreous pathology and disease of retina.

Prevalence- An estimated five million individuals worldwide suffer from this disease today, accounting for 4.8% of blindness worldwide[1]. According to the World Health Organization, diabetes is the leading cause of new cases of blindness among adults aged 20-74 years. More than 170 million people worldwide currently have diabetes, and this number is projected to skyrocket to 366 million by 2030. Approximately half of these cases are likely to develop DR. Rates of both diabetes and DR are expected increase significantly in developing countries due to a lack of access to health care.[2] In 2014, there were approximately 422 million people (8.5% of the world‘s adult population) living with diabetes; compared to 108 million in 1980 (2016 WHO Global Report on Diabetes)[3]. It commonly affects both eyes and can lead to vision loss if it is not treated. The treatment of modern system of medicine, focal laser therapy, anti-vascular growth factor drugs. These treatment modalities have side effects, so in such disorders. Ayurveda is very effective in such complicated disorders. As such this disease is not mentioned directly in our texts so we can take it as a type of raktapitta doshaja timira.

Timira is a disease which is included under *dristigata roga*[4]-disorders of vision and visual apparatus. *Timira* is *vata pradhan tridoshaja vyadhi* which gradually

progress to involve the *Patalas* thereby deteriorating the vision. *Dristipatalagata roga* is mainly attributed to *Sira srotas abhisyandam* and *raktavaha sroto dusti* due to a variety of *Achakshyushya ahara* and *vihara*. *Nidana* of endogenic eye diseases are mainly *Achakshyushya* factors which vitiates pitta. The vitiated *pitta* in turn vitiates the pitta vaha srothas. Due to interconnection of pitta and rakta, *raktavaha srotas* is also vitiated. As the *nidana* factors are *Achakshyushya*, the vitiated *pitta* and *rakta* have an affinity towards penetrating the eyes. Hence the vitiated *dosha* turn towards the eyes through *Jatroordhwa* siras and *srotas* and finally gets confined to the eyes. In this context there is a stage when the *Sirasrothas* are deeply involved which is known as *Sira abhisyanda* in which the *Asrya sthana* is *Srotas*, affected *dhatu* is *Rakta* and vitiated *dosa* is *Pitta*.

Case report –

MATERIAL AND METHOD

Presentation -55yrs old female patientof type 1 diabetic since 10 yrs complaining of gradual diminution of vision attending *shalakya* OPD,was chosen having signs of retinal hemorrhages.

HISTORY OF PRESENT ILLNESS- According to patient he was asymptomatic since 6 months gradually she found diminution of vision. She was already taking ayurvedic prescriptions for diabetes from NIA, so she was referred to our opd for her ocular complaints.

Regular visit was done for 1 month at 15 days interval in hospital. The patient‘s past medical history was significant only for T2DM. She did not have hypertension. Her T2DM was moderately controlled with allopathic and ayurvedic medicines medicines. She did not have glaucoma and had no history of undergoing eye surgery or any treatment for diabetic retinopathy (DR).

Treatment plan- Patient was treated on OPD basis.

Selected Ayurvedic Drugs:*Vasakadi kwath* was selected as oral drug.

Table no. 1: Dose, Route, Kala (drug administration time) of drugs used in the management

Name Of Medicine	Dose	Route	Kala
Vasakadi kwath	30 ml	Oral	Morning and evening

Duration: 1 month

Follow up - will be done once in 15 days for 1 month.

Criteria for selection of medicines: *vasakadi kwath* was selected on the basis of their properties useful in pacifying vitiated *dosha* in diabetic retinopathy and ability to relieve signs and symptoms.

Ingredients of trial drug –*Vasa Nimba , Patola ,Triphala ,Musta*.

Preparation of *kwath*-- Each content were taken in equal quantity in *yavakuta* form. Patient was advised to prepare fresh *kwath* as per classics both time.

Counseling- As patient was also psychologically upset hence proper counseling of patient was done. She was made aware about the disease and the associated fact that Diabetic patient are more prone for ocular complaints. Patient was made aware regarding her condition and her health.

Follow up 1st- After first follow up patient had mild relief in signs and symptoms.

Duration- This treatment was carried out for 1 month.

Follow up -After 15 days.Signs and symptoms of the patient were assessed during each follow up and results were drawn after last follow up.

Local Examination-- visual acuity was 6/60 in the right eye and 6/12 in the left eye with normal intraocular pressures at first visit Near vision before correction was N36 and after using glass N6.He was using glasses only for near vision. Slit lamp examination of the anterior segment was normal in both eyes, and dilated fundus exam was significant for mild non-proliferative DR in both eyes.(microaneurysms, hard exudates, few signs of dot and blot hemorrhages in retina specially in the perimacular area are found), rest findings are within normal limits. Presbyopic glasses were advised by the optometrist.

Assessment criteria –

Subjective parameter- criteria based on symptomatology of *Timira*.

vihval drishti—Blurred vision not corrected by spectacles.

Objective parameter

- visual acuity
- Fundus examination by direct opthalmoscope
- Investigation- blood sugar (fasting .pp), blood pressure.

Treatment

There are currently no eye-specific treatment options for early stage DR. The patient was referred back to her endocrinologist for diabetes management and told to return for proper follow up meanwhile oral medication of *vasakadi kwath* was indicated for resolution of hemorrhages found in non proliferative type of diabetic retinopathy along with for improvement of vision too.

Investigations	**Before treatment**	**After treatment**
Vision acuity	RE 6/60 LE 6/12	RE 6/24 LE 6/9
Blood pressure	140/80mmhg	130/80mmhg
Fasting blood sugar	96mg/dl	85mg/dl
Blood sugar (pp)	122mg/dl	120mg/dl

Follow up- On her one-month return visit to the hospital, the patient was found to have RE 6/24 vision AND LE 6/9 but still had evidence of mild non-proliferative DR in her eyes.

Discussion-

Basis of drug selection- The drugs selected here for *Timira* should be *vata* pacifying as well as *pitta shamaka* with *rakta prasadka* properties which will help in healing and reducing the symptoms that are caused especially due to ocular hemorrhages. As in the textual reference of *vasakadi kwath* it is indicated that it is useful in hemorrhage, *kapha dosha shamak* and *chakshusya* properties[5,6].

The contents of the trial drug are altogether *shita virya*, *tikta kashyaya rasa*, *shonitha sthapana*, thus indicating their appropriate role in *Timira* as well as retinal hemorrhages.*Triphala*[7] to possess free radical scavenging, antioxidant, antiinflammatory, antipyretic, analgesic, antibacterial, antimutagenic, wound

healing, anticariogenic, antistress, adaptogenic, hypoglycaemic, anticancer, chemoprotective, radioprotective and chemopreventive effects.

C. rotundus are reported to possess antiinflammatory, antipyretic, antibacterial and antidiarrhoeal properties, while antiinflammatory and antibacterial activities[8].

Conclusion –

Vasakadi kwath[9] seems to have role in improving visual acuity found in diabetic retinopathy. Visual acuity improved from RE 6/60 to 6/24 LE 6/12 to 6/9 in 1 month along with subjective relief. But still no significant changes observed in the fundus pathology like haemorrhages , (dot and blot),hard exudates, and microaneurysms in both eyes.

REFERENCES:

1. "Diabetic retinopathy". Diabetes.co.uk. Retrieved 25 November 2012.
2. Kertes PJ, Johnson TM, eds. (2007). Evidence Based Eye Care. Philadelphia, PA: Lippincott Williams & Wilkins. ISBN 0-7817-6964-7.
3. Tapp RJ; Shaw JE; Harper CA; et al. (June 2003). "The prevalence of and factors associated with diabetic retinopathy in the Australian population". Diabetes Care. 26 (6): 1731–7. doi:10.2337/diacare.26.6.1731 (inactive 2015-01-12).
4. Sushruta samhita uttar tantra with ayurveda tatva sandipika hindi commentary,ambikadatta shashtri chaukhambha series Varanasi, 1996(su ut 7/6,7,8,9), su utt -1/26-27
5. Bhavmishra, Bhavprakash, with vimarsha by kc chunekar, Jamnagar 1997.
6. Sharma pv dravyaguna vigyana, chaukhambha prakashan, academy Varanasi.
7. Baliga MS[1], Meera S, Mathai B, Rai MP, Pawar V, Palatty PL. Scientific validation of the ethnomedicinal properties of the Ayurvedic drug Triphala: a review.
8. Nagarajan M[1], Kuruvilla GR[1], Kumar KS[2], Venkatasubramanian Pharmacology of Ativisha, Musta and their substitutes.
9. Chakradatta of shri chakrapaani, vaidyaprabha hindi commentary, chaukhambha Sanskrit bhawan, Varanasi 2014. netraroga chikitsa-44, 189, 190

GERIATRIC ORAL DISEASES

Dr. Pratibha Waghmare

ABSTRACT:

An oral cavity is an imperative part of our body, which has a noteworthy role in chewing, swallowing, speech, nutritional status, facial expression as well as self-reliance. Thus, oral health significantly related to the quality of life. *Shalakya tantra* is a branch of Ayurveda which deals with treatment of organs above shoulders. There are nine openings of physical body and oral cavity is one of them. Older persons are at risk of chronic diseases of the mouth, including dental infections (e.g., caries, periodontitis), tooth loss, benign mucosal lesions, and oral cancer. Other common oral conditions in this population are xerostomia (dry mouth) and oral candidiasis, which may lead to acute pseudomembranous candidiasis (thrush), erythematous lesions (denture stomatitis), or angular cheilitis.

Keywords- Geriatric oral diseases, *Jara,* Age related oral cavity changes, *Talushosha, Dantaveshtaka, Krimidanta*.

Introduction:

Aging is a natural process. Old age should be regarded as a normal, inevitable biological phenomenon. According to Ayurveda, *Jara*/ aging is not a disease but a natural phenomenon like hunger, thirst or sleep. *Jara* also called as *Vardhakya* (aging) is defined as that which has become old by the act of wearing out. In the theory of natural destructions (*Swabhavoparamavada*), *Charaka* describes that there is a causative factor for the manifestation of a being but there is no cause for the cessation of this manifestation, since death following birth is a state of natural flow. Accordingly, *Jara*/aging is influenced by factors affecting *Shareera* (physical), *Indriya* (emotional), *Satwa* (psychic level), *Agni* (metabolism) and *Bala/Ojas* (immunity).

Jara is accompanied by the process of decay and manifests in the form of various degenerative changes. According to *Sushruta Samhita*, the surgical compendium of Ayurveda, defines health as ‗the equilibrium of the three biological humors (*doshas*), the seven body tissues (*dhatus*), proper digestion and a state of pleasure or happiness of the soul, senses and the mind. According to Ayurveda, as age advances, several changes take place in the body, in the external appearance, in the condition of *Dosha, Dhatu, Mala, Agni, Oja,* and so on, as well as in the mental

and cognitive functions. *Shalakya tantra* is a branch of Ayurveda which deals with treatment of organs above shoulders. There are nine openings of physical body and oral cavity is one of them. according to the *Shalakyatantra*,65 varieties of oral diseases can arise in seven anatomical locations i.e. 8 on the lips, 15 on the alveolar margin, 8 in connection with teeth, 5 on the tongue, 9 on the palate, 17 in the oropharynx and 3 in a generalized form. with advancing age, the age-related oral cavity changes and geriatric oral disease can be occurred. Elderly people are susceptible to several chronic diseases also.

Oral mucosal changes in old age

Oral mucosal surfaces possess a protective self-cleansing mechanism provided by the natural turnover of the epithelial cells. Age-related changes in the oral mucosa and dietary or hormonal deficiencies lead to diminished keratinization, dryness, and thinning of the epithelial structures.

The clinical appearance of the oral mucosa in older patients is often indistinguishable from that of younger patients. However, changes over time including mucosal trauma, mucosal diseases, and salivary gland hypofunction can alter the clinical appearance and character of the oral tissues in older patients."

The stratified squamous epithelium becomes thinner, loses elasticity, and atrophies with age. A declining immunological responsiveness further increases the susceptibility to infection and trauma. An increased incidence of oral and systemic disorders, along with increased use of medications, may lead to oral mucosal disorders in elderly persons.

Age related Bone changes

Age related osteoporosis is common and, in edentulous patients, may play a role in atrophy of alveolar and possibly basal bone, although no clear relationship has been established. Atrophy of alveolar bone is related mainly to tooth loss.

Age related Nerves and musculature changes

Continued muscle function is a major requirement for the maintenance of speech and mastication. In all patients with advancing age there is a reduction in total muscle mass which occurs through a Muscle function is dependent on the performance of the nervous system and both exhibit independent age-related changes. Nerve cell loss is universal in old age and is exhibited in the brain and

spinal cord. There are also age-related changes in neurotransmitters, resulting in motor dysfunction.

Age related Sensory changes

It is known that taste and smell sensitivities change throughout life and often decline with ageing. Taste sensation is an important function of the tongue that loss due to aging. Ageing results changes in the membranes of the gustatory cells, which alter the function of ionic canals and receptors. These changes can make foods become tasteless thus resulting in a reduction in appetite. A diminution of taste results from the degeneration of taste buds and a reduction in their total number as renewal is much slower in elderly people. Elderly people have considerable differences in their sensory perception and capacity to detect the pleasantness of foods compared with younger people.

Changes in Salivary glands and salivary secretion with aging

Saliva lubricates the oral cavity, prevents decay by promoting remineralization of teeth, and protects against fungal and bacterial infections. With advancing age, there is an atrophy of acinar tissue, a proliferation of ductal elements and some degenerative changes in the major salivary glands and also minor salivary glands.

Complaints of a dry mouth (xerostomia) and diminished salivary output are common in older populations. In addition to dry mouth, clinical manifestations of xerostomia include a burning sensation, changes in taste, and difficulty with swallowing and speech. Although salivary flow does not decrease with age alone, certain medications and illnesses increase the risk of xerostomia in older persons. Drugs with anticholinergic effects are the most likely to produce complaints of diminished salivary output and dry mouth.

One treatment for head and neck cancers is external beam radiation, which causes severe and permanent salivary hypofunction and results in persistent complaints of xerostomia. Radiation-induced destruction of the serous-producing salivary cells occurs via apoptosis. Sjögren's syndrome is one of the most frequently encountered chronic autoimmune connective tissue disorders and is the most common systemic condition associated with xerostomia. Sjögren's syndrome occurs in primary and secondary forms. Those patients with primary Sjögren's syndrome have salivary and lacrimal gland involvement, with an associated decreased production of saliva and tears.

According to Ayurveda *Talu shosha* can be corelated with xerostomia.

Changes in Teeth and supporting structure with aging

Because of aging, the appearance and structure of teeth tends to change. Teeth occurs more dark and yellow due to the change in thickness and composition of the underlying dentin and enamel. Abrasion and attrition also contribute to changes in tooth appearance. The number of blood vessels entering a tooth and the enamel decreases with age leading to reduced sensitivity. With less sensitivity to environmental stimuli, the response to caries (decay) or trauma may decrease. Additionally, the width and fiber content of the periodontal ligament decreases with aging. Gingival recession is another common condition in older persons which exposes the cementum to an oral environment and responsible for root caries.

Gingivitis

Plaque is a biofilm composed of gram-negative bacteria and endotoxins that develops on teeth at the gingival margins, leading to gingival inflammation (gingivitis). Gingivitis is characterized by erythematous and edematous gingival tissue, which often bleeds easily with instrument probing and gentle brushing. Other causes of gingivitis include trauma and tobacco use.

Periodontitis

Periodontitis occurs when gingival inflammation causes the periodontal ligament to detach from the cementum and tooth structure, leading to increased gingival pocket depth, loosening of the tooth, and, ultimately, tooth loss. Many older persons are prone to periodontal detachment and tooth loss because of poor oral hygiene and gingival recession. In Ayurveda it can be corelated with *dantaveshtaka dantagat roga*.

Dental Caries

Dental caries can occur at any age. However, because of gingival recession and periodontitis, older persons are at higher risk of developing root caries. In Ayurveda it can be corelated with *krimidanta dantagat roga*.

Candidiasis

Although it is estimated that Candida species are present in the normal oral flora of healthy adults, certain conditions increase the risk of overgrowth in older persons.

These conditions include the pathogenicity of individual Candida strains; local factors (e.g., xerostomia, denture irritation, tobacco use, steroid inhaler use); and systemic factors (e.g., immunodeficiencies, systemic corticosteroid use, antibiotic use, chemotherapy, radiation therapy, endocrine disorders, malabsorption, malnutrition).

Oral Cancer

Tobacco and alcohol use are thought to be responsible for up to 75 percent of oral cancers in old age. Precancerous lesions and early oral cancer can be subtle and asymptomatic. Most oral and oropharyngeal cancers are squamous cell carcinomas that arise from the lining of the oral mucosa. Oral cancer most commonly occurs, in order of frequency, on the lateral borders of the tongue, on the lips, and on the floor of the mouth.

Conclusions

A variety of oral changes may be observed in elderly patients. These changes can be attributed to a variety of physiological and pathological processes which have developed over a lifetime. Clinically, it is important to recognize these changes and to develop planning strategies which take account of them.

REFERENCES:

1. ***Sushruta Samhita*** with ‗*Ayurveda Tattva-sandipika*' Hindi Commentary, part I and II, By *Kaviraja Ambikadatta Shastri*, Chaukhamba Sanskritsansthan, Varanasi, Reprint year 2013, 2015.
2. ***Charaka Samhita*** **-** of *Agnivesa* Edited by ‗*Vaidya Manorama'* Hindi Comentary, Edited By professor Ravidatta Tripathi, Vol.1 and 2, Chaukhambha Sanskrit Pratishthan, Delhi, Reprint year 2006.
3. **ORBAN's Oral histology and embryology,** Adaptation Editor G S Kumar.
4. hafers Text book of Oral pathology, Adaptation Editor B Sivapatha sundaram.
5. K.B. Bhargava, S.K. Bhargava- ENT Diseases 9th Edition, Reprint -June 2012.
6. PL Dhingara/Shruti Dhingara-ENT & HEAD AND NECK SURGERY 7TH EDITION, REPRINT 2018.

***

MENIERE DISEASE – An Overview

Dr. Praveen Kumar Pandey

Final year pg scholar shalakya tantra PIA

Guided by Dr R.G.Dole (M.S.) Shalakya Tantra

Introduction

Meniere disease is a disorder of the inner ear characterized by hearing loss, tinnitus, and vertigo. In most cases, it is slowly progressive and has a significant impact on the social functioning of the individual affected.

Meniere‘s was a French physician who described this disease in 1861. There is endolymphatic hydrops characterized by increased tension of the endolymph.

Patients with a definite Meniere disease according to the Barany Society have:

1. Two or more spontaneous episodes of vertigo with each lasting 20 minutes to 12 hours
2. Audiometrically documented low- to medium-frequency sensorineural hearing loss in one ear, defining and locating to the affected ear on in at least one instance prior, during, or after one of the episodes of vertigo
3. Fluctuating aural symptoms (fullness, hearing, tinnitus) located in the affected ear
4. Not better accounted for by any other vestibular diagnosis

Probable Meniere disease can include the following clinical findings:

1. Two or more episodes of dizziness or vertigo, each lasting 20 minutes to 24 hours
2. Fluctuating aural symptoms (fullness, hearing, or tinnitus) in the affected ear
3. The condition is better explained by another vestibular diagnosis

Etiology

1. Age – usually it occurs over the age of 30 years.

2. Sex- Both the semester are equally affected. But slight common in male .

Studies of the temporal bone revealed endolymphatic accumulation in the cochlea and the vestibular organ in patients with Meniere disease. Current research links endolymphatic hydrops to a hearing loss of >40dB.

Vertigo may or may not be associated. Therefore endolymphatic hydrops is not entirely specific for Meniere disease and can be found in cases of idiopathic sensorineural hearing loss.

The exact etiology of Meniere disease remains unclear. Different theories exist, but genetic and environmental factors play a role. The relation to common comorbidities remains elusive.

History and Physical

At the emergency room or in the general practice the physician will differentiate between vertigo of central, peripheral, and cardiovascular cause. Red flags for a central origin of vertigo, according to Harcourt et al., are neurological symptoms or signs, acute deafness, new type or onset of headache, or vertical/torsional/rotatory nystagmus.[9]

If Meniere disease is suspected, the patient should be questioned about the character of vertigo, hearing loss, and earlier episodes. A full otologic history is part of the clinical investigation.

If Meniere disease is suspected, one should perform a full otologic examination, facial nerve testing, and assessment of nystagmus with Frenzel goggles, Rinne, and Weber tests.

Rinne and Weber: Will show sensorineural hearing loss in acute Meniere disease or advanced disease.

Frenzel goggles: May show horizontal nystagmus with a fast-beating component away from the affected vestibular organ in the acute setting.

Head impulse testing (HIT): In contrast to other peripheral vestibular disorders, this test has a low sensitivity in Meniere disease.[10]

Evaluation

Audiometric evaluation is mandatory in all patients with Meniere disease. Fluctuating low frequency unilateral sensorineural hearing loss is characteristic of the disease. The hearing loss can progress to all frequencies. Tinnitus is common and ipsilateral.[11]

All patients with one-sided hearing loss should undergo magnetic resonance imaging (MRI) to rule out retrocochlear pathology. In some countries a BERA (brainstem evoked response audiometry) is sufficient. There is no need to perform imaging in the acute setting but may be done within a few weeks after the onset of symptoms. High-resolution MRI imaging may directly show endolymphatic hydrops in the affected organs. More research is underway to show if this is of clinical use.[12][13]

Treatment / Management

Different treatment options for Meniere disease exist with substantial variability between countries. None of the treatment options cure the disease. As many treatments have a significant impact on the functioning of surrounding structures, one should start with non-invasive approaches with the fewest possible side effects and proceed to more invasive steps.

5. Sodium restriction diet: Low-level evidence suggests that restricting the sodium intake may help to prevent Meniere attacks.[9]
6. Betahistine: Substantial disagreement in the medical community about the use of betahistine exists. A Cochrane review found low-level evidence to support the use of betahistine with substantial variability between studies.[15] Medical therapy in many medical centers often starts with betahistine orally.
7. Intratympanic steroid injections may reduce the number of vertigo attacks in patients with Meniere disease.[16]
8. Intratympanic gentamycin injections: Gentamycin has strong ablative properties towards vestibular cells. Side effects are sensorineural hearing loss because of a certain amount of toxicity towards cochlear cells.[17]
9. Surgery with vestibular nerve section or labyrinthectomy: Nerve section is a therapeutic option in patients who failed the conservative treatment options and labyrinthectomy when surgical options failed. Labyrinthectomy leads to a complete hearing loss in the affected side.[14]

Differential Diagnosis

4. Basilar migraine: Associated with vertigo but without aural symptoms

5. Vestibular neuronitis: Associated with vertigo lasting for several days, no aural symptoms
6. Benign paroxysmal positional vertigo: Associated with vertigo related to head movements, lasting seconds to minutes, no aural symptoms
7. Medications (e.g., aminoglycosides and loop diuretics)

Prognosis

According to Perrez-Garrigues et al., the number of episodes of vertigo is higher in the first years of the disease and decreases in later years regardless of whether patients receive treatment; most patients reach a "steady-state phase free of vertigo."
As with vertigo, loss of hearing is highest in the early years of the disease and stabilizes in later years. Usually, there is no recovery from hearing loss.

Complications

In later stages of the pathology, patients may experience sudden unexpected drops without loss of consciousness (Tumarkin attacks).

One systematic review reports bilateral involvement of the vestibular organ in up to 47% of patients within 20 years.

Patients with Meniere disease report significantly impaired quality of life compared to healthy individuals.

***

TINNITUS

Dr .Priyanka Satapathy
1st year pg scholar
Shalakya tantra,parul University
Guided by Dr.R.G Dole

Introduction :

- Tinnitus is the perception of sound when no corresponding external sound is present. Nearly everyone will experience a faint normal tinnitus in a completely quiet room but it is only of concern if it is bothersome or interfers with normal hearing or correlated with other problems. While often described as a ringing ,it may also sound like a clicking,buzzing,hiss or roaring.

Prevalence rate of tinnitus:

- Tinnitus is a common problem for millions of people ,epidemiologic studies have reported its prevalence to range in from 8% to 25.3%of the US population. Population-based studies conducted in other nations have found a similar prevalence of tinnitus ,ranging from 4.6% to 30%.

Causes:

- Its particularly related to ageing(presbyacusis).
- Exposure to noise
- Presence of ear wax
- Head injury
- Stress
- Ear infections
- Meniers disease
- Some medication such as aspirin
- Overactive thyroid gland or anaemia
- Tinnitus that occurs in only one ear should be taken more seriously as it may be caused by an acoustic neuroma.

The symptoms of tinnitus can affect different ways,and severity of the noises that are heard can range from mild to severe.

Symptoms:

- A sound of crickets or roaring,buzzing,hissing,whistling,and high-pitched ringing.clicking or pulsatile tinnitus (the noise accompaniesyour heartbeat)

Types:

- Subjective tinnitus,meaning that you hear a sound but it cannot be heared by others.
- Objective tinnitus,meaning your doctor may sometimes actually hear a sound when he or she is carefully listening for it.

Diagnosis :

- Hearing (audiological) exam. During the test, you'll sit in a soundproof room wearing earphones that transmit specific sounds into one ear at a time. You'll indicate when you can hear the sound, and your results will be compared with results considered normal for your age. This can help rule out or identify possible causes of tinnitus.
- Movement. Your doctor may ask you to move your eyes, clench your jaw, or move your neck, arms and legs. If your tinnitus changes or worsens, it may help identify an underlying disorder that needs treatment.
- Imaging tests. Depending on the suspected cause of your tinnitus, you may need imaging tests such as CT or MRI scans.
- Lab tests. Your doctor may draw blood to check for anemia, thyroid problems, heart disease or vitamin deficiencies.
- Do your best to describe for your doctor what kind of tinnitus noises you hear. The sounds you hear can help your doctor identify a possible underlying cause.
- Clicking. This type of sound suggests that muscle contractions in and around your ear might be the cause of your tinnitus.
- Pulsing, rushing or humming. These sounds usually stem from blood vessel (vascular) causes, such as high blood pressure, and you may notice them when you exercise or change positions, such as when you lie down or stand up.

- Low-pitched ringing. This type of sound may point to ear canal blockages, Meniere's disease or stiff inner ear bones (otosclerosis).
- High-pitched ringing. This is the most commonly heard tinnitus sound. Likely causes include loud noise exposure, hearing loss or medications. Acoustic neuroma can cause continuous, high-pitched ringing in one ear.

Treatment :

- Since tinnitus can be caused by a wide variety of different health conditions, the treatment that is recommended will depend on the underlying cause.
- For example, if caused by a severe or long term ear infection,antibiotics may be prescribed.if by a build up of ear wax,then ear drops or ear irrigation is recommended.
- However in most cases of tinnitus,there is no cure and so treatment is aimed at managing the symptom on a day –to-day basis.
- Objective tinnitus:
  - Gamma knife radiosurgery(glomus jugulare)
  - Shielding of cochlea by Teflon implant
  - Botulinum toxin(palatal tremor)
  - Clearing ear canal
  - Using a neurostimulator
- Subjective tinnitus:

Drug and nutrients:

- Lidocaine,niacin,benzodiazepines(lorazepam,clonazopam)

Electrical stimulation:

- Transcranial magnetic stimulation
- Transcutaneous electrical nerve stimulation

Surgery:

- Repair of perilymph fistula

External sound:

- Tinnitus masker

Psychological

- Cognitive-behavioral therapy

Self help remedies:

- Relaxation: stress can make your tinnitus worse.regular exercise such as yoga, may help you relax.
- Listening to the music: calming music and sounds may also help you to relax and fall slep at bed time.
- Sound generators: these are also known as white noise generators or tinnitus markers.they may be useful for drowning out the sound of tinnitus.
- Hearing aids: if you have hearing loss, using a hearing aid may help with your tinnitus.this is because hearing sounds that you would not otherwise be able to hear may help override the tinnitus noise.

Comprehensive laser rehabilitation therapy of tinnitus:

- Irradiation points:
- Procesus mastoideus aiming in the direction of contra-lateral orbit.
- Meatus acusticus externus in the direction of the acoustic duct.
- 2-3times a week.
- 8-10 applications in total.
- 4-6 weeks break

***

BIBHITAKADI GHRITA ASCHYOTAN IN SHUSHKAKSHIPAKA W.S.R TO DRY EYE DISEASE IN GERIATRICS A PILOT STUDY

Dr. Purva Lokhande,

Shalakya tantra Department. Ymt Ayurvedic Medical College,

Kharghar, Navi Mumbai.

Email: lokhandepurva8@gmail.com,

Mobile No.8796867168

Guide - Dr Nutan Ravindra Radaye,

Hod &Professor Shalakya tantra Department.

Ymt Ayurvedic Medical College Kharghar Navi Mumbai

Emil: nutan.radaye.nr@gmail.com,

Mobile No. 9820512695

ABSTRACT:

–Dry eye is a multifactorial disease of the ocular surface characterized by loss of homoeostasis of the tear film, and accompanied by ocular symptoms, in which tear film instability and hyperosmolarity, ocular surface inflammation and damage and neurosensory abnormalities play etiological roles.‖1

Patients having symptoms like irritation, foreign body sensation, feeling of dryness. Sushkakshipak is a very chronic type of sarva gata roga producing rukshata or dryness of the lids. Because of vitiation of vata dosha treatment of vitiated vata is important.

Aschyotan means instillation of few drops of medicines to the open eye from height of 2 angula in the kaninika sandhi. mode of action of aschyotan is the instilled medicine will penetrate into the Sandhi (Kaneenika Sandhi) where the medicine is instilled, then to the Shuklamandala, then to Ghraana, Mukha and remove the Mala present in Urdhwabhaga.2

INTRODUCTION:

Netra roga chikitsa is classified into samanya chikitsa and vishesh chikitsa. Sarvadehika chikitsa includes panchakarma and vishesh chikitsa includes Netra kriyakalpas like tarpan, putpaka, seka, aschyotan, anjan, bidalaka and pindi. Kriyakalpa means the procedures in which various drugs are applied in and around the eyeball as a treatment modality2.efficacy of these procedures depends on drug, preparation, mode of instillation and ocular drug absorption.

Aschyotan means instillation of few drops of medicines to the open eye from height of 2 angula for aschyotan different mode of preparations like swarasa, kashaya, rasakriya, putapaka, ghrita are commonly used. It is the primary treatment for all eye diseases where doshik vitiation is minimal. The literary meaning of aschyotan is elimination of doshas by dropping or flowing.2

Indications

in Vyaktavastha of Roga, when the symptoms like Ruk, Toda, Kandu, Gharsha, Kleda, Ashru, Daha, Raga, Shotha are present Aschyotana is the treatment of choice.

Contraindications

Amavastha and Prabala Roga Aschyotana should not be done. KEYWORDS Shushkakshipaak, aschyotan, sarvagat roga AIM.

To evaluate the effect of Bibhitakadi Ghrita aschyotan in Shushkakshipaka with special reference to Dry eye disease in geriatrics.

OBJECTIVES

- To study change in Schirmer-I test reading in geriatrics.
- To study changes in symptoms of Shushkakshipaka in geriatrics.

MATERIALS AND METHODS

A total of 5 elderly patients with dry eye syndrome participated in this study. Those Having complaints of irritation, foreign body sensation, feeling of dryness in eyes included in study. Their past medical and surgical history was nonspecific. During slit lamp examination there is mebomian gland blockage, lusterless and keratinization of conjunctiva visualized, in fluorescein test puddling and delineate lesion is seen on cornea and conjunctiva. Schirmer-I test was positive. Then dry eye diagnosis was confirmed.

SR. NO	PT NAME	AGE/SEX	SCHIRMER –I TEST	TFBUT
1	Pt no. 1	65/F	7mm	11 sec.
2	Pt no. 2	67/M	9mm	8 sec.
3	Pt no. 3	62/M	11mm	13sec.
4	Pt no. 4	70/F	10mm	10sec.
5	Pt no. 5	75/M	11mm	10 sec.

After diagnosis following treatment given. Aschyotan of bibhitakadi ghrita 10 drops are advised.

DRUG REVIEW[3]

Sr. no	***Dravya***	**Quantity**
1	*Bibhitaki, haritaki, aamalaki, patol patra, neem bark, vasa kalka*	1 Part
2	*Goghruta*	4 Part
3	*Jala*	16 Part

PROCEDURE

bibhitakadi ghrita3 aschyotan was given 10 drops for 3 days. In poorva karma supine position is given to patient in kriyakalpa room, in Pradhan karma instillation of bibhitakadi ghrita drops to the open eye from height of 2 angulas done. In paschat karma a mild fomentation is given and advised for not to see bright things5.

OBSERVATION AND RESULT

After aschyotan on follow up observation:

SR. NO	PT NAME	AGE/SEX	SCHIRMER –I TEST	TFBUT
1	Pt no. 1	65/F	15mm	15 sec.
2	Pt no. 2	67/M	17mm	20sec.
3	Pt no. 3	62/M	17mm	20sec.
4	Pt no. 4	70/F	20mm	24sec.
5	Pt no. 5	75/M	18mm	23 sec.

There was relief of symptoms of those patients was noted on follow up and Clarity of vision was also noted. In shushkakshipaka there is vata, pitta dosha prakopa and rasa, rakta, mamsa, meda were dushya and also Netra is majja dhatu predominant.so, treatment should be planned accordingly which will do shodhan of prakupit doshas and will give strength to eyes. Ghrita Madhura and sheeta so best for vata pitta dosha also ghrita will nourishes to majja dhatu and give strength to eyes. According to modern pharmacology drugs enters in the eyeball by passing through the cornea. This penetrartion depends on permeability of various layers of cornea. Fat soluble drugs readily penetrate these layers. These maintain the lipid layer of tear film which reduces evaporation of aqueous layer of tear film.

CONCLUSION

Aschyotan of bibhitakadi ghrita is definitely effective in shushkakshipaka w.s.r dry eye syndrome in geriatrics. Dry eye disease can be successfully treated with Ayurveda recurrence can be avoided or its intensity can be reduced. A more case series should be conducted in the similar cases for further scope of study. Images will be added in presentation

REFERENCE:

1. Khurana A K, comprehensive ophthalmology, seventh edition, reprint 2019, New Delhi, Jaypee Brothers Medical Publishers (P) Ltd., Chapter 16, page no. 406

2. Stuvert D, Ashwini M.J. ,review on aschyotana and eye drops, international journal of AYUSH vol.9 issue 3; 2020: 9 (3); 204-214,July-sept 2020

3.बबितकबबिधानटोरारष्टिसक।

नक्मिेबिघसा ं सि्नबब्गान व्यनहबत ॥ यो. उ. नान372

Vaidya Lakshmipatishastri Vidyotini Hindi Tika Sahit Chaukhmbha Prakashan,Varanasi, Edition Reprint 2010 Uttarardha Netraroganam Chikitsa Adhyay, Verse No. 1, Page No.372 4.Mehetre D., Role of Tarpan Kriyakalpa In The Management of Digital Eye Strain – A Case Study, international journal of research in Ayurveda and medical sciences vol 2, Issue 4.

ISSN: 2582-2748(Oct-Dec 2019)

5. Acharya Vagbhata, Ashtanga Hridayam, by P.V. Sharma, Sutrasthana, 10th edition, Varanasi: Choukambha Orientalia, 2017, p.303.

NON PROLIFERATIVE DIABETIC RETINOPATHY – A CASE STUDY

Dr. Rajkumar Rathod

(1st-corresponding author)

Dr. Narayanan Namboothiri (2nd),

Post Graduate scholar, Dept. Of Shalakya Tantra, Parul Institute Of Ayurveda, Limda, Vadodara, Gujarat, India.

Sreedhareeyam Ayurveda Eye hospital & Research center Koothattukulam, Ernakulam, Kerala.

Abstract

Diabetes Mellitus is a common metabolic disorder in which, there is high blood sugar Level over a prolonged period and occurs in one of two forms: Type1 or Insulin Dependent Diabetes Mellitus (IDDM) and Type2 or Non-Insulin Dependent Diabetes Mellitus (NIDDM). Diabetic retinopathy is most common and serious complication of Diabetes and Changes in the retina are observed by 10 years of Diabetes history or even earlier due to modified Lifestyle in present era. This disease results in generalized macro and micro vascular Complications linked to glycemic control and affect theses resulting in poor vision or even Blindness. Despite of better understanding of its pathogenesis, satisfactory treatment is yet to Be established. Ayurveda is well recognized for its role in preventing the disease, but as such No description is available in text which clarifies the progression of Prameha to loss of vision. So Ayurvedic treatment purely lies on the basis to pacify the pathological changes which Occurs in eye as a result of diabetes according to modern parameters. This case presentation Reviews the Pathophysiology of diabetic retinopathy with a view to understand therapeutic Target and discusses the **possible role of Ayurveda in its management.**

Keywords: Diabetic Retinopathy, Diabetic Mellitus, Exudates, Hemorrhages, Prameha

INTRODUCTION:

A moderately built male patient aged 60 years came to Netrarog OPD of Sreedhareeyam Ayurveda Hospital, koothattulum, Kerala with chief complaint of

blurred vision associated with spot and floaters in vision of both eyes, and also watering from both eyes. The Patient‘s medical history was significant for Diabetes mellitus for 20 years without any visual complaints till last 6 months.

COMPLAINT HISTORY: Patient started noticing blurriness of vision in Both Eyes (RE>LE) since last 6 Months, associated with watering from both eyes. He also noticed floaters and black spot in vision Field after 1 Month of that. Then he also noticed defect in Peripheral vision. During this period he also noticed Increased RBS level, which continuously fluttering up and down near by 180 mg/dl to 220 mg/dl.

TREATMENT HISTORY: Patient consulted to Ophthalmologist about mentioned complains, and he diagnosed with Non Proliferative Diabetic Retinopathy. Ophthalmologist Found some NPDR changes like increased retinal thickness, CME, Dot Blot hemorrhages In OCT. So then patient Underwent 2 time Intra vitreal Inj Therapy in BE. He found very mild Improvement after that treatment. After that, he diagnosed with IMC in BE, So simultaneously did cataract surgery in BE In Months. After cataract Operation also he didn‘t find more visual improvement. Apart from this, he is taking his Diabetes Medicines Regularly according to his Physician Advices. His Family History Reveled that his father and Mother Both Was Known Case of Diabetes Mellitus.

EXAMINATIONS:

Parameter	BT(31/01/2020)		AT(25/05/2020)	
	RE	LE	RE	LE
Visual Acuity	6/18	6/18(B)	6/12	6/18
Vn With PG	6/18	6/12	6/12	6/12
Near Vision N18	N18	< N18	< N18	
IOP(mm of Hg)	16	19	17	16
PG Power	+0.50 (cyl)	+0.50 (cyl)	+0.50 (cyl)	+0.50(cyl)
Refraction manual	NIG	+0.50 (cyl)	NIG	+0.50(cyl)
Fundus	NPDR changes	NPDR changes	NPDR Changes persist	
NPDR Changes persist				

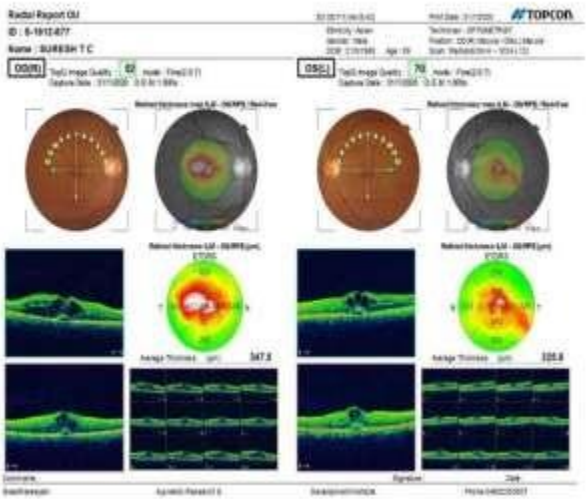
Dot Hemorrhages	Dot Hemorrhages	Hemorrhages reduced	Hemorrhages reduced	
CME	CME	CME subsided	CME reduced	
Increased Retinal Thickness	Increased Retinal Thickness	Retinal thickness reduced	Retinal thickness reduced	
Peripheral Vision	Disturbed	Disturbed	Improved	Improved
Night Vision	Normal	Normal	Normal	Normal
Color vision	Normal	Normal	Normal	Normal
Floaters	Present	Present	subsided	Subsided
Black Spot	Present	Present	Spot size Reduced	Spot size Reduced

INVESTIGATIONS: FBS & PPBS

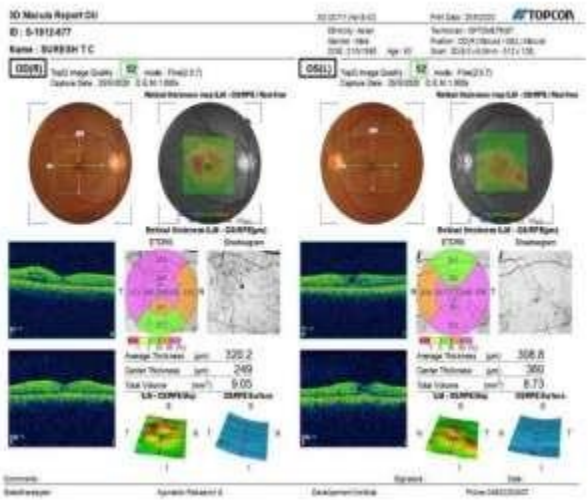
BS	31/01/2020 (1ST visit)	25/05/2020 (3rd visit)
FBS	178 mg/dl	142 mg/dl
PPBS	252 mg/dl	237 mg/dl

OCT

Before treaetment OCT – 31/01/2020



After treaetment OCT – 25/05/2020



TREATMENT COURSE

The patient took continues 5 months same OPD medicines with 2 follow-ups, as mentioned here…… (1st visit – 31/01/20, 1st follow up – 15/02/20, 2nd follow up – 25/05/20)

1. Amruthotaram Kashayam – 60 ml - BD
2. Vasti Rasayanam – 1 tab – BD
3. Chandraprabha Gulika – 1 tab – BD
4. Pathyapunarnavadi Choornam – 1 Tsp - HS
5. Anjanam with Netraprbaha Eye Drops – 1 Drop – BE - BD
6. Pindi With Mukkadi Gulika + Karuthavattu – BD

FOLLOW-UP:

During the subsequent follow-ups clarity of vision had improved in both eyes. During the course of the Treatment Blood Sugars were monitored regularly which varied between 140mg/dl to 170mg/dl (Patient was advised to continue his OHA (Oral Hypoglycemic Agent). Patient was advised to follow some basic rules during follow-up period, as Avoid Fermented, salty , junk food and fast foods,Avoid rubbing and forcefully washing of eyes, Eat more vegetables and drink plenty of water, Practice Pranayama, Do some light exercise and walking regularly, Maintain diabetic level to be safe against further eye damage.

DISCUSSION:

Medical treatment of diabetic retinopathy is aimed at prevention of retinopathy. Tight glycemic control is associated with reduction in the development of retinopathy. Good metabolic control and proper management of hypertension or other associated conditions prevent the progression of diabetic retinopathy. Satisfactory treatment is yet not available. Diabetic retinopathy can be well controlled by ayurvedic treatment as ayurvedic herbs not only reverse the blood clots formed in the retina and vitreous but also strengthen the metabolic function so that further chances of blood leakage can be minimized.

Ayurveda controls the disease and increases blood circulation and nourishes retina. Use of ayurvedic therapies disables the disease and possibility of being cured increases.As such Pramehajanya Netraroga (diabetic retinopathy) is not mentioned

in ayurvedic text. Symptom wise it is a complication of prameha. The word prameha is derived from Pra-means excess, Meha- ksharana (passing of urine). So prameha is passing excess urine and turbid in colour (Prabhoota avil mootrata). 20 types of prameha if ignored and not treated properly in time can convert into madhumeha and become incurable. Diabetes mellitus in ayurveda is known as madhumeha. In madhumeha dosha is kapha pradhan tridosha. Dushya is meda (predominance), mansa, rakta, vasa, majja, lasika, kleda, shukra, oja. In the above it is clear that all the body tissues are vitiated in madhumeha. This is a disease in which all the tissues or organs may be damaged. The disease is not localized in any one organ of the body but may vitiate any of the important organs. From this it may be clear that eyes are also affected by Madhumeha. According to Acharya Charaka and Vagbhata, eye is afraid of kapha dosha. So Samanya chikitsa sidhanta in ayurveda for diabetic retinopathy can be considered as follows:

(1) Pramehahar chikitsa, (3) Srotorodhhar chikitsa,

(2) Kaphahar chikitsa, (4) Urdhavraktapittaharchikitsa.

- In case of haemorrhages: according to Pratimargharan chikitsa sidhanta virechana is the main shodhan chikitsa, urdhavraktapittahar shamana chikitsa, bahya chikitsa includes takradhara, shirolepa or shiropichu with sheeta stambhan aushadi should also be need to use.
- In case of Sanga (occlusion): Srotorodhhar chikitsa can be done.
- In case of Macular oedema: Shophahar chikitsa is to be done.

As such no description is present on diabetic retinopathy (prameha updrava) in our texts but it can be treated by following measures Lepa over eyes, Netra seka or Netra dhara ,Takradhara, Shirodhara, Netra tarpana(if no active bleeding), Shiro lepa or pichu with sheet stambhan , aushadhi , Putpaaka, Oral medicines e.g. Saptamrita lauh, Triphla ghrita, Mahatriphla ghrita, Patoladi ghrita, Jivantyadighrita, Triphla churan, Shatavari churan, Rasayan chikitsa.

The disease cannot be cured 100% but can keep stable in that condition. Many patients suffering from diabetic retinopathy become blind by other means of treatment whereas Ayurveda controls this disease and increases blood circulation and nourishes retina.

CONCLUSION :

Diabetic Retinopathy is a microangiopathy involving the retinal precapillaries arterioles, capillaries and post capillaries venules. It is the leading cause of blindness in elderly subjects. As no satisfactory treatment is available for diabetic retinopathy, new approaches are needed to slow the progression and limit the damage caused by this disease. Ayurveda can play significant role in the integrated management of this condition. The disease cannot be cured 100% but can keep stable in that condition. Ayurvedic drugs and therapy controls the disease and increases blood circulation and nourishes retina. Restoration of structural and functional integrity in disease of drushtipatalacaused due to Prameha, was the objective of treatment in this case. Ayurveda treatment principles can help to arrest the progression of the disease and in this patient in subsequent follow-ups improvement were noticed though he presented with advanced stage.

The treatment modalities employed was efficacious in controlling raktasrava and shotha, promoting restoration, improving visual perception, clearing sthanika pandu lakshana and Madhumehahara properties of the drugs helped. As a prophylactic treatment a proper screening of patients by chakshu visharada's at regular interval with proper intervention of kriyakalpa, life style modification, pathyapathya along with oral medicines at appropriate time will definitely retard the progression of the disease and maintains the retinal function.

REFERENCES:

1. A.P.I textbook of medicine, 15th edition,
2. Comprehensive Ophthalmology by A.K. Khurana, 4rth edition.
3. Clinical Ophthalmology by Jack J. Kanski, 5th edition. Butterworth Heinemann publishers.
4. Concise Medical Physiology by Chaudhari, 4rth edition. New Central Book publication.
5. Anatomy and Physiology of eye by A. K. Khurana Indu Khurana, 4rth edition. New age international limited publishers.
6. Textbook of Ophthalmology by H.V.Nema, Nitin Nema, 6th edition. Jaypee publications.

7. Parsons diseases of eye by Ramanjit Sihota, Radhika Tandon, 20th edition. Elsevier publishers.

8. Essentials of Ophthalmology by Samar.K.basak, 4rth edition. Current book international publishers.

9. Principles and Practise of Ophthalmology by Albert and Jackobiec.

10. Astanga Hridaya of Vagbhatta: With Sarvanga Sundara commentary, by Vaidya Lalchandra Shastri; Ist edi (1990), Motilal Banarasidas Publishers, Delhi.

11. Astanga Samgraha of Acharya Vagbhatta: with Indu commentary, by Dr. D.V Pandit Rao and Vd. Ayodhya Pandey.

12. Charaka Samhita of Agnivesha: Elaborated and redacted by Charaka and Dridhabala (Volume 2), Edited with Vaidyamanorma hindi commentary by Acharya Vidhyadhar shukla and Prof. Ravi Dutt Tripathi, Chaukhambha Sanskrit pratishtan, Delhi.chikita sthan 4 and 6th chapter.

14. Chaudhury R.C.: Illustrated Shalakya Vigyana; XVIth edi.(2002), Chaukhambha Orientalia. Varanasi.

15. Sushruta Samhita of Maharishi Sushruta: Edited with Ayurveda tattva sandipika by Kaviraja Ambikadutt Shastri, Part 1, Chaukambha Sanskrit sansthan Varanasi.

16. Yog Ratnakar: With commentary by Vaidya Lakshmipati Shastri; llnd edi. (1973), Chaukhambha Sanskrit Series, Varanasi.

***

AYURVEDIC MANAGEMENT OF PRESBYOPIA – A CASE REPORT

***Dr. Sangita Kamaliya**

1 Ph.D Scholar,

****Dr. D.B.Vaghela**

2 I/C HOD & Associated prof.

Department of Shalakya Tantra, ITRA, GAU, Jamnagar

ABSTRACT

Introduction:

Presbyopia is the gradual loss near vision, ability to focus on nearby objects. It's a natural, often annoying part of aging. Presbyopia usually becomes noticeable in early to mid-40s and continues to worsen until around age 65. On the basis of symptoms, presbyopia can be correlated with Timira, for which treatment modalities have been mentioned elaborately and Ayurvedic treatment was done for the management of this case.

Materials & Methods: A fully conscious, normal oriented male, aged 41 years, came to OPD of Shalakya Tantra, ITRA, Jamnagar, with chief complaints of defective vision for near only in both eyes and headache during near work for 2 months. He was treated with Koshtashodhana, three sittings of Tarpana with Jivantyadi Ghrita, and Triphala Choorna and Saptamrita Lauha with Madhu and Ghrita.

Results: At the end of study, near vison glasses was not required and improvement in headache was found.

Conclusion: Thus, it can be concluded that Ayurvedic approaches are helpful to control presbyopia. This study emphasizes on the importance of integrated approach in healthcare.

Key words: Jivantyadi Ghrita, Presbyopia Tarpana, Timira.

INTRODUCTION:

A visual condition which becomes apparent especially in middle age and in which loss of elasticity of the lens of the eye causes defective accommodation an in ability to focus sharply for near vision. In the presbyopia person‘s eye do not properly accommodate for near objects because of the age related changes like, loss of the elasticity of the lens, changing in the lens curvature from the continual growth and loss of power of cilliary muscle have been seen. First sign of presbyopia is eyestrain i.e. difficulty to seen in dim light, problem focusing on small object for near are usually first noticed between the age 40 to 50. Persons, who do more near work, develop presbyopic error before 40years.

In recent times, modern medical science has made tremendous and remarkable progress and advance in the field of ophthalmology. But the importance of Ayurvedic treatment in the diseases of eyes cannot be ignored owing to the above-mentioned pitfalls of modern therapy.

In, Ayurveda, the clinical features related to visual disturbances are seen only in Drishtigata Rogas. Hence, all cases of visual disturbances can be correlated under the broad heading of the Timira-Kacha-Linganasha group. A clinical feature of Timira (second Patala) can be correlated with the most important refractive error, which is, presbyopia. In the Ayurvedic classics, we find the concept of Chakshushya and many drugs, and therapeutic procedures explained which enhance visual acuity as well as improve the health of the eye.

On the basis of symptoms, presbyopia can be correlated with Timira, for which treatment modalities have been mentioned elaborately and Ayurvedic treatment was done for the management of this case.

All the efforts should be made to strengthen the eyes by procedure like Tarpana and so on. Once the vision is lost, all the different things of this world will become one kind –that is darkness.

MATERIALS AND METHOD: CASE HISTORY:

A fully conscious, normal oriented male, aged 41 years, has visited OPD of Shalakyatantra, ITRA hospital, Jamnagar with chief complaints of Defective vision for near only in both eyes for 2 months. According to patient, he was suffering from headache during near work. Headache increases at the end of the day. Past history has no any relevant past history was found. Family history have no any family history was found. On eye examination by Torch Light and Slit Lamp, we

found Lid, Conjunctiva, Cornea, Anterior Chamber, Iris, Pupil and Lens were normal. In Personal History patient was Vegetarian, Appetite Moderate, Bowel Regular, Micturation Normal and Sleep Normal.

Visual acuity: Table 1.

	Right EYE	**Left EYE**
	B.T.	**B.T.**
DV unaided	6\6	6\6
NV unaided	N12	N12

TREATMENT:

Shodhana and Shamana both treatments were given to the patient.

Treatment protocol:

Koshta Shodhana - 5days

Internal Medicine – 45 days

Tarpana - 7 days (3 sittings)

- Spectacle correction for near vision +1.00 DS in both eyes.

Table 2. Therapeutic intervention adopted:

PROCEDURE	**DRUG USED**	**DURATION**	**DOSAGE**
Koshta Shodhana	*Erandabhrishta Haritaki Choorna*	five Days	5 gm
Internal Medicine	*Jivantyadi Ghrita*	45 days	10 gm before meal two time per day
3 sittings of *Tarpana*	*Jivantyadi Ghrita*	Seven Days	As required

Koshtashodhana was done with Erandabhrishta Haritaki Choorna five gm at bed time with lukewarm water for five days. 1st sitting of Tarpana was done after Koshta Sodhana with Jivantyadi Ghrita in morning time. After seven days interval 2nd sitting of Tarpana was done with Jivantyadi Ghrita in morning time and after seven days interval 3rd sitting of Tarpana was done. Jivantyadi Ghrita was started internally after Koshta Sodhana and was continued for 45 days with milk before meal two time per day.

RESULTS:

	BT	After 1st sitting of *Tarpana*	After 2nd sitting of *Tarpana*	After 3rd sitting of *Tarpana*
Right eye				
DV	6\6	6\6	6\6	6\6
NA	N12	N12	N8	N6
Left eye				
DV	6\6	6\6	6\6	6\6
NA	N12	N12	N8	N6

Table 3. Visual acuity:

After the treatment near vison glasses not required. There was no headache during near work. No adverse event was reported during study.

DISCUSSION:

The line of management of Timira includes Snehana, Raktamokshana, Virechana, Nasya, Anjana, Shirobasti, Basti, Tarpana, Lepa and Seka that are to be followed repeatedly. Among these Snehana, Virechana (Koshtashodhna), and Tarpana were followed in this case.

Koshta Shodhana was done with Erandabhrishta Haritaki Choorna. Virechana was not administered in this case though Koshtha Shodhana can be considered having some properties of Virechana like Vatanulomana and Agni Deepana. Haritaki is having Deepan Pachana and Vatanulomana activites and Erand Taila is also Deepana and Sara. Both the drugs are Vata-Kapha Shamana and Vatanulomana and helps in Samprapti Vighatana of Vataja Timira.

Tarpana was done with Jivantyadi Ghrita (containing Jivanti, Ksheera, Ghrita, Prapaundrika, Kakoli, Pippali, Rodhra, Saindhava, Shatahva, Yashtimadhu, Draksha, Sharkara, Daruharidra and Triphala) as it is indicated in Timira. Considering the Doshakarma, Jivantyadi Ghrita appears to be predominantely Vatashamaka followed by Pittashamaka and Kaphashamaka (by virtue of its Rasa, Guna, Veerya and Vipaka). Thus, the overall effect of the compound drug is Vata Pradhana Tridosha Shamaka and hence it disintegrates the pathology of Timira.

Probably Tarpana Karma nourishes the Tarpaka Kapha, which is situated in the Shiraha (Brain). So indirectly Tarpana Karma is potentiating the action of higher centre of the different sense organ including eyes, located in the Shirah (Brain).

Jivantyadi Ghrita was given internally with milk. The drug having Madhura Rasa and Madhura Vipaka possess Rasayana, Chakshushya, Jeevaniya, Balya etc. properties. Because of its Rasayana action the substrate Dhatus of the poor Patalas as well as Drishti are nourished, thus by improving the functional capacity of the eye, there is decline in various symptoms. Madhura Rasa and Madhura Vipaka also pacify the Vatta Dosha, which is the most important factor responsible for Timira.

CONCLUSION:

Tarpana with internal medicine in presbyopia had shown significant result to decrease the spectacle power. This case study shows effectiveness of Ayurveda in presbyopia. Study on a larger number of samples to draw more concrete conclusions. Awareness should be created for the role of Ayurveda in such type of diseases especially concerned with Ayurveda where modern medicine has limited role.

REFERENCE:

1. Hand book of ophthalmology by G.N.Seal and S.K.Seal
2. Vaidya Jadvji Trikamaji Acharya, Sushut Samhita, Reprint 2015. Chaukhambha 2015. Uttara Tantra, Chp. 7/15
3. Ashtanga Hridayam, Upadhyaya YV., editors. Sutra sthana, 24/22. Varanasi: Chaukhamba Sanskrit Sansthana; 2003. Vidyotini Hindi Teeka; pp. 139.
4. Pt. Hari Sadasiva Sastri Paradakara Bhisagacarya. Astangahrdaya. Reprint 2014. Chaukhambha 2014. Uttara sthana; Timir pratishedha, chapter 13\47. 822 pp.
5. Pt. Hari Sadasiva Sastri Paradakara Bhisagacarya. Astangahrdaya. Reprint 2014. Chaukhambha 2014. Uttara sthana; Timir pratishedha, chapter 13\50. 822 p.
6. Pt. Hari Sadasiva Sastri Paradakara Bhisagacarya. Astangahrdaya. Reprint 2014. Chaukhambha 2014. Uttara sthana; Timir pratishedha, chapter 13\2-3. 818-819 p.

***

PRESBYOPIA

Dr. Shweta Singh

PG - 1st Year (Shalakya Tantra Department)
Parul Institute of Ayurveda, Vadodara, Gujrat

Introduction

Presbyopia [eye sight of old age] is not an error of refraction but a condition of physiological insufficiency of accommodation leading to progressive fall in near vision. This activity talks about the pathophysiology, evaluation, and various management options in a comprehensive and concise way. Among the various causes of visual impairment for near, presbyopia is an important and the most common cause in older adults. This holds for the entire population globally. Presbyopia is an ever-increasing global problem affecting over a billion worldwide.

Etiology

A progressive decrease in the accommodative capacity of the lens is the major cause of presbyopia. Various theories depicting the mechanism involved in presbyopia have been proposed.

Helmholtz theory: As per this theory, the ciliary muscle contraction results in the relaxation of zonules and an increase in the convexity of the anterior lens capsule.

Schachar Theory: This theory, in contrast to Helmholtz's theory, says that the ciliary muscle contraction results in increased tension of equatorial zonular fibers with simultaneous relaxation of anterior and posterior zonular fibers. This concept results in the steepening of the anterior central part of the lens with flattening of the lens periphery.

Catenary theory of Coleman: As per this theory, with ciliary muscle contraction, there develops a pressure gradient from vitreous compartment to aqueous compartment, resulting in the steepening of the anterior lens capsule in the center.

Pathophysiology

Normally, the nucleus is stiffer than the cortex in the older lens, whereas, among young individuals, the cortex is stiffer than the nucleus. However, the stiffness of

both nucleus and cortex equalizes between 35 to 40 years; and this is probably the cause of the onset of presbyopic symptoms around 40 years of age. In a emmetropic eye far point is infinity and near point varies with age :

- Being about7cm at the age of 10 yr,
- 25cm at the age of 40 yr,
- 33cm at the age of 45yr .
- Since , we usually keep the book at about 25cm ,so we can read comfortably upto the age of 40 yrs.

Causes

1. Age related changes in the lens

a) Decreased in the elasticity of lens capsule, and
b) Progressive increase in size and hardness[sclerosis] of lens substance which is less easily moulded.

2. Age related decline in cilliary muscle power-may also contribute in causation of presbyopia.

- Causes of premature presbyopia .
- Causes of premature presbyopia are
- Uncorrected hypermetropia
- Premature sclerosis of the crystalline lens.
- General debility causig presenile weakness of ciliary muscle.
- Chronic simple glaucoma.

Symptoms

1. Difficulty in near vision- patient usually complaint of difficulty in reading small prints[to start with in the evening and in dim light and later even in good light]. Another important complaint of the patient is difficulty in threading a needle etc.
2. Asthenopic symfatigue otoms-due to fatigue of the ciliary muscle are also complained after reading or doing any near work.
3. Intermittent diplopia, occurring due to disturbed relationship between accommodation and convergence, may be experienced by few patients.

Treatment / Management

Non-surgical Option

1] Optical treatment- Prescription of appropriate convex glasses for near work.

- Rough guide for providing presbyopic glasses in an emmetrope can be made from the age of the patient.
    - 45yrs +1 to +1.25D
    - 50yrs +1.5 to 1.75D
    - 55yrs +2 to +2.25D
    - 60yrs +2.5 to +3D
- Exact presbyopic addition required, should however, be estimated individually in each eye in order to determine how much is necessary to provide a comfortable range.
- Basic principles for presbyopic correction are
- Always find out refractive error for distance and first correct it.

The bifocal lenses can be classified based on their make as:

- Fused bifocal: A depression curve in the crown glass is fitted with a flint button.
- Solid bifocal: made from a single material
- Cemented bifocal: a segment is glued onto a single vision lens.
- Split bifocal: two separate lenses are held together with a frame.

Based on the design, it can be classified as:

- D-seg or straight top bifocal lens
- Round segmented bifocal lens
- Executive bifocal lens
- Kryptok lens- here, the segment for near vision correction is round.

2. Contact lenses: Contact lenses can help deal with presbyopia in 2 ways. Monofocal contact lenses can correct one eye for distance and the other for near. Always, the dominant eye is corrected for distance. This concept is called 'monovision.' The advantage with monovision is that the clarity of vision is good over a range of distance; however, the contrast sensitivity and stereopsis are reduced.

Surgical Options

1. Corneal procedures: Monovision with laser refractive correction is well known. Various corneal ablation profiles were proposed for presbyopia correction. "Induced central steep island," "decentered steep area," and "near vision zone in the mid-peripheral cornea" are some of them.

2. Scleral procedures: There are various scleral expansion procedures with PMMA annulus into the sclera overlying the ciliary muscles, which promise to correct the presbyopia. The scleral implants are proposed to act by causing scleral expansion over the ciliary muscles, thus restoring the ciliary muscle contraction and accommodation.

3. Monovision with intraocular implant: These options are beneficial when the patient has presbyopia and a higher degree of ametropia.

4. Phakic intraocular lenses include anterior chamber lenses (angle supported and iris-claw) and posterior chamber lenses. These days anterior chamber angle supported multifocal lenses are available, which not only corrects for near but also corrects ametropia for distance.

5. Clear lens extraction followed by IOL implantation for correction of presbyopia and ametropia has popularized. Planned myopic astigmatism after cataract surgery gives some pseudo-accommodation.

Differential Diagnosis

Diseases affecting near vision are:

- Diseases of the optic nerve
- Posterior subcapsular cataract
- Hypermetropia
- Astigmatism

Prognosis

Presbyopia is inevitable and usually starts around 40 years of age. Patients do better with glasses and contact lenses. Surgical options with relatively good acceptance have also been discussed.

Complications

Uncorrected presbyopia results not only results in difficulty reading near but also causes drowsiness and headache. With presbyopia correction, these symptoms also resolve.

Improve Eyesight Naturally with Yoga

Here are a few yoga exercises that are simple and yet powerful. Regularly practicing these exercises can help to relax the eye muscles and make them healthier and stronger.

Palming

Palming is not exactly an exercise, but an ancient yoga relaxation technique quite similar to meditation. You can start by sitting on a comfortable chair, maintaining a straight posture and then follow the steps.

Blinking

Proper blinking is necessary to clean your eyes, relieve the strain and improve eye comfort. You can set aside a few minutes every day for the following blinking exercises.

Up and down viewing

- Start by sitting with legs straight in front of your body.
- Close your fists with your thumbs pointing upwards and place them on the knees.
- Keep your arms straight and slowly lift the right thumb.
- Focus on the thumb and follow its motion upwards.
- When your thumb is raised to a maximum, gradually bring it down to the initial position.

Tratak on flame technique

Ensure the flame is pointing towards you and is in line with your eyes. You should maintain a distance from the flame which is equal to your height. For example, if the practitioner is 4ft, they will have to sit 4ft from the flame. You can sit in any comfortable posture (preferably Sukhasana or Padmasana). Draw your gaze to the flame and direct all of your attention to it.

Direction: Face towards the east.

REFERENCE:

1. ―An Eye-Cleansing Trataka Practice‖, https://www.yogajournal.com/lifestyle/health/ayurveda/practices/insight-for-sore-eyes/
2. ―Comprehensive ophthalmology‖, A K Khurana; Aruj K Khurana; Bhawna Khurana, 2015, https://books.google.co.in/books/about/Comprehensive_Ophthalmology.html

***

AN AYURVEDIC OVERVIEW TOWARDS MANAGEMENT OF PRESBYCUSIS- BHADIRYA

Dr. Sreeshma V

1st yr PG scholar, Dept. of Shalakyatantra

Ayurveda is basically the science of life and longevity. Ageing is a process of physical, psychological and social change in multi-dimensional aspects. According to Ayurveda, ageing is outcome of kala or parinama. Vata dosa is the most important factor in the pathophysiology of ageing obviously because of its natural predominance at that stage of life. Ayurveda is a unique therapeutic methodology to delay ageing and to minimize the intensity of problems occurring in this degenerative phase of one‘s life. Good ayurvedic practice gives us a healthy ageing.

Presbycusis is the most common type of sensorineural hearing loss caused by the natural ageing of the auditory system. It usually manifests at the age of 65. It occurs gradually and initially affects the ability to hear high pitched sounds.

Symptoms

1. Sounds or speech become dull, muffled or attenuated.
2. Need for increased volume on television, radio, music and other audio sources.
3. Difficulty in using the telephone.
4. Difficulty in speech discrimination against background noise.

Types of Presbycusis

Four types of presbycusis are there

1.Sensory– degeneration of organ of corti, starting at the basal coil and progressing gradually to the apex.

2.Neural- degeneration of the cells of spiral ganglion, starting at the basal coil and processing to the apex.

3.Strial /Metabolic- due to atrophy of stria vascularis in all turns of cochlea.

4.Cochelear conductive- due to stiffening of basilar membrane.

AYURVEDIC VIEW

Can be compared to Badhirya.

It is one among the Karna Gatha rogas which has been mentioned by all Acharyas.Karnasritha Vata along with Kapha fills up the Shabdavahini siras and when left untreated occludes the Srothomarga and results in badhirya. (su.u. 20/8)

GENERAL LINE OF TREATMENT OF KARNA ROGA

Common treatment protocol for all Karna rogas are as follows

Administration of ghritha pana and rasayana, avoid Shira Sanan, excessive talking, taking rest and over exercise, practice Brahmacharya.

Treatment for delaying and management of Presbycusis include

1. Nidana parivarjana- avoid excessive talking, exposure to continuous loud noise, excessive vyayama, exposure to continuous aatapa seva and mithyayoga of sastras.

2. Snehana- intake of snehas helps in controlling Vata dosas. Intake of Sneha before and after food followed by intake of warm water is good in reducing Vata dosas. Shatapaka Bala Taila along with milk can be used.

3. Swedana- Sneha sweda produces mridutwa to srotas and it helps in removing excess dosas in our body. Practicing Pinda sweda or Nadi Sweda helps in increasing micro circulation and vasodilation by which Ama Pachana and Sroto shodhana occurs.

4. Sneha Virechana- virechana is a best method to expels the liquified dosas after Sneha sweda. It helps in control the ama which results in the aggravation of kapha which is a constituent dosa in bhadirya.

To control the sthanagatha dosa overall shodhana of the shareera is required. By snigda virechana sroto Shodan and indriya prasadana occurs.

5. shiro abhyanga and shiro vasti- it helps in controlling vata and kapha dosas

6. Karna abhyanga- it helps in reducing jara, shrama and vata dosa. It also increases circulation, stimulates vital marma points.

7. Karna poorana- it provides bhrimhana effect and smoothens the ear canal.

8. Nasya- Provides stimulation and brimhana effect to Sringataka marma (cavernous sinus). Provides nourishment through the connection of eustachian tube and does sroto shodhana.

9. Rasayana- Rasayana is a branch of Ayurveda, which deals with the special approach aimed to prolong the life, prevent ageing and eliminate diseases and thus minimize the degenerative processes. It helps in Indriya tarpaka, Prasadana, Prabhodana, actions which revitalize the urdhajatrugata avayavas. Special rasayanas indicated in anti-natal care can prevent the congenital abnormalities like bhadhirya, mukatwa etc…Rasayana processes Medhya, Bruhmhana, Tarpana action which restores the normal functioning and corrects the pathologies of urdhwajatrugatha vikaras.

Rasayana aushadies like Bringaraja rasayana, Amrita prasa ghrita,

Ashwagandha ghrita, Amalaka rasayana can be used in this case.

Practicing dhinacharya like abhyanga, Karna poorana, Paadha abhyanga, Pratimarsa nasya, Gandoosha also helps in reducing age related bhadirya.

Shaman oushadies like Vatavidwamsa rasa, Triphala guggul, Ekanga Veera rasa, Rasanadi guggul, Kachanara guggul, Bilwadi taila, Katu taila, Apamarga kshara taila, Swargika taila, Kshara taila, Narayana taila can be used.

Prevention and management of health problems could help the elderly to improve quality of life and remain self-dependent for their daily activities to maximum possible extend. Hence through the ayurvedic interventions to an extend we can delay the ageing process and help in management of degenerative diseases.

***

ROLE OF AYURVEDA IN REHABILITATION OF LOW VISION IN GERIATRIC POPULATION

Submitted by– Dr. Vaishnavi M R,

First year PG Scholar, Department of Shalakyatantra, Amirta School of Ayurveda

Under the Guidance of - Dr Ashwini B N and Dr K Sivabalaji

Department of Shalakyatantra, Amirta School of Ayurveda

INTRODUCTION

Ageing is a progressive generalized impairment of body that leads to sluggishness of the body functions. Ageing is considered as Vaardhakyavastha in Ayurveda. Charaka, says in shareeera continuous destruction takes place which leads to jaravastha (aging). Jaravastha is the state where metabolic activities slow down due to the weakening of agni. Due to kala swabhava, agni and thereby the dhutus are depleted. Multiple pathology and co-morbidity are common in the elderly includes senile dementia, cataract, deafness, hypertension and ischemic hear disease, osteoporosis, degenerative disorders. Ageing process is irreversible but the competence of physical, mental and cognitive faculties can be retained through Ayurveda. Roughly 100,000 people worldwide die each day of age-related causes. Ageing cannot be prevented but it can be healthy and graceful by adopting Ayurveda. Following concepts of dinacharya, rithucharya, sadvritta, swasthavrutta and rasayana aids to achieve healthy aging.

Geriatric population suffers from various eye related problems. India has about 77 million people vulnerable to vision-related disorders at or above the age of 60 years representing a large group and the number is estimated to reach 180 million by 2026. In Ayurveda, there are many references emphasising the age-related changes in the eye are included under Swabhavjanya Vyadhis. In Ayurveda, lifespan is divided in three stages viz. Balya, Youvana and Vardhakya where Kapha, Pitta and Vata dosha are predominant respectively. On Vardhakya stage, Vata dosha is predominant making them vulnerable to develop vataja vyadhis. Even vata dominance results in vartmasthambha, vartmasankocha, timiram, akshisoolam. These are expected and preventable changes which can be done by ayurveda.

MATERIALS AND METHODS

1. Simon L. Low vision and rehabilitation for older people: integrating services into the health care system. Community Eye Health. 2008 Jun;21(66):28-30. PMID: 18670600; PMCID: PMC2467468.
2. Özen Tunay Z, İdil A, Seza Petriçli İ, Özdemir Ö. Low Vision Rehabilitation in Older Adults. Turk J Ophthalmol. 2016 Jun;46(3):118-122. doi: 10.4274/tjo.68878. Epub 2016 Jun 6. PMID: 27800274; PMCID: PMC5076294.
3. Swenor BK, Lee MJ, Varadaraj V, Whitson HE, Ramulu PY. Aging With Vision Loss: A Framework for Assessing the Impact of Visual Impairment on Older Adults. Gerontologist. 2020 Aug 14;60(6):989-995. doi: 10.1093/geront/gnz117. PMID: 31504483; PMCID: PMC7427480
4. Astanga Hridayam utharasthana, commentary by Prof. K R Srikantha Murthy, 6th edition 2012, Choukhambha Krishnadas Academy, Varanasi, Uttara sthanam
5. Susruta. Susrutha Samhita with Nibandha Sangraha commentary by Sri Dalhanacharya and Nyaya Chandrika Panjika Commentary by Sri Gayadasacharya, Edited by Vaidya Yadavji Trikamji Acharya and Narayan Ram Acharya Kavyathirtha, Reprint edition. Choukhambha Sanskrit Sansthan, Varanasi, 2012
6. Agnivesha. Charaka Samhita, with Ayurveda Dipika commentary by Chakrapanidatta, edited by Vaidya Yadavji Trikamji Acharya, reprint edition. Chaukhambha Subharati Prakashan, Varanasi

DISCUSSION:

Low vision

Visual impairment is common in older adults and it is proportionally increasing with age. The number of people with moderate or severe visual impairment worldwide is estimated to increase to 588 million by 2050. Low vision is any chronic form of vision impairment not correctable by glasses or contact lenses that adversely affects every day functions. The legal definitions of _low vision‘ by WHO is based on visual acuity and visual field. Low vision is defined as visual acuity in better eye after refractive correction between 20/70 (0.3) and 20/400 (0.05, 3mps) or a visual field less than 20 degrees.

In low vision, the degree of loss of vision is less than in blindness. In case of blind, use white canes or learn Braille is neccessary unlike in people with low vision. For patients with low vision, there is still scope for rehabilitation and hope for a better life. This is possible through the use of low vision devices and visual rehabilitation. Low vision devices (such as magnifiers) help patients make the best use of their existing vision patients who are prescribed low vision devices are also taught how to use these devices in their daily life. Low vision imparts a person‘s quality of life and is a major socioeconomic problem for both individuals and the public. As the elderly population increases the age-related vision problems becomes more common, the importance of low vision rehabilitation is also growing.

Causes of Low vision in geriatric population:

The causes of low vision in older people vary according to geographic area, socioeconomic status and many other factors. Commonest causes are glaucoma, diabetes, macular degeneration, hypertensive retinopathy or retinal detachment. Cataract cannot be considered a cause of low vision, unless there is good reason not to perform a cataract operation

Older people with low vision face specific challenges. They have more difficulty getting access to eyecare and treatment in general as they are often dependent on their relatives and tend to be more socially isolated. In older people low vision is usually accompanied by other physical disabilities, as they become more common with increasing age. Disabilities such as hearing or cognitive impairment mean that older people will find it more difficult to understand instructions in a health care setting; they may not hear them properly or may need them to be repeated more often than a younger patient

Why rehabilitation is important?

Rehabilitation teaches patients how to adapt their environment appropriately in order to make the best use of their existing vision. Patients who are prescribed low vision devices are also taught how to use these devices in their daily life. The importance of providing appropriate low vision and rehabilitation services cannot be overemphasised. Every person with low vision - especially older people - must be considered on an individual basis.

The needs of older patients with low vision will depend on their circumstances: the region they come from, their economic status, their literacy levels, their family responsibilities, their attitude towards ageing and disability, their general health,

their motivation, and so on. Whereas loss of reading ability is often considered to be the most devastating consequence of visual impairment in high-income countries, it may have little significance and impact on the quality of life of an older person in a rural village in a low- or middle-income country.

Low vision clinicians may be tempted to prescribe an array of magnifiers, telescopes, filters, or non-optical aids. However, if these devices are unsuitable, they may simply end up under the mattress when the patient returns home. The clinician must therefore ensure that the low vision devices they prescribe are acceptable in the home; the older patient must also be motivated or interested enough to use them

Role of Ayurveda in preventing ocular aging and age-related ocular morbidities:

With the use of rasayana chikitsa and chakshushya ahara:

Rasayana is a special branch which deals with various ways to achieve excellence of dhatus. It can specific disease related or in general to rejuvenate the body. This rejuvenation is important in geriatrics as this class is dominated by vata and as kala swabhava there is depletion of dhatus.

Naimittika rasayan is disease specific, it is given in glaucoma, diabetic retinopathy. Prior to naimittika rasayana, treatment of the disease by panchkarma and kriya kalpas are necessary. Achara rasayana should be started during late adulthood only. The appropriate use of chakshushya and rasayana dravyas will help to maintain the health of Netra and prevent age related eye disorders. The use of yashtimadhu ghrita and triphala act as rasyana. Some illutations are - Acharya Vagbhata has advised that triphala along with honey and ghrita should be consumed at nights, daily for strengthening of sight. Ghrita and Navaneeta are extremely rich in Vitamin A and choline with good amount of vitamin E, Riboflavin, Niacin and pantothenic acid; vitamin K, foliate and vitamin B12 in small amount. Anti-stiffness factor present in butter prevents hardening of arteries and cataract

Acharya Susrutha has explained in timira pratisheda adhyaya that daily consumption of purana ghrita, triphala, satavari, patola, mudga, amalaka and yava can prevent from timira. Paysa prepared from satavari alone or that prepared from amalaka or yavaudana added with more of ghee consumed, followed by drinking decoction of triphala cures timira. Leaves of jivanti, sunisannaka, tanduliyaka, vastuka, cilli, mulakapotika and meat of animals of jangala desha are all good for

eye sight. Leaves of patola, karkitaka, karavella, vartuka, tarkari, sigru and artagala cooked with ghee also good of eyesight.

Acharya susrutha has given specific mention of milk and other dairy products, stating that cow‘s milk is healthiest for eye. The ghee and butter made out of cow‘s milk is imperatibe in eye health maintenance. The milk is to be taken at night before bed time for best results.

Dhatuposhana- replenishing the status of dhatus in jaravastha

Concept of saptadhatu - rasa, raktha, mamsa, medha, asthi, majja and sukra and their importance to maintain healthy state of life and Jaravastha. Dhatukshaya results in sira shaithalya, dhamani shaithalya, sandhi saumyatha, rukshatha, anidra etc. Pancha bhutagni and panchavidha vipaka and their significance in health and jara avastha influence of chintha (anxiety) shoka (grief), bhaya(fear), krodha(anger), dukkha (sorrow), anidra (insomnia) on jatharagni. Inter-relation of jatharagni- dhatvagni and bhutagni in health and disorders of jata-avastha. upachaya(dehapushti) and Apachaya(dhatukshaya) in health and jara- avstha respectivelyDhatuposhana in Ayurveda through Svayonivardhana dravya prayoga- Rasa dhatu poshana - Madhura, Snigdha, Sheeta dravya; Rakta dhatu poshana - Amla, Guru, Snigdha, Ushna dravya; Mansa dhatu poshana - Amla, Lavana, Ushna dravya; Meda dhatu poshana - Madhura, Guru, sheeta, Snigdha dravya;Asthi dhatu poshana - Sthira, Vishada dravya; Majja dhatu poshana - Snigdha, Pichhila, sheeta dravya;Shukra dhatu poshana - Snigdha, Pichhila, Sthira, Vrishya Karma dravya.

Basics of Dhatuposhana in advance age: Dravyas having following properties are best in Jara-avastha -Laghu, Snigdha, Pichhila, Shlakshana, Mridu.

Role of Dinacharya to prevent ocular diseases in geriatric population

1. AnjanaKarma:- As eyes are mainly of Teja property, they can easily get affected by Kapha Dosha. So regular Anjana Karma is suggested. Hence regular Anjana Karma will help in avoiding ageing effects in the eye. Rasanjana should be done every week.

2. Padabhyanga (Foot massage):- will also be helpful in maintaining healthy eyes. In the centre of the feet, 2 Siras are situated which are directly connected to the eyes, transmit the effect of the medicines applied over the feet in the form of massage. Hence every person should use Padabhyanga. It is Drustiprasaadakara (Nourishes eyes). Abhyanga, through its Vata ameliorating action is responsible for better function of Chakshurindriya. As Vayu is found predominantly in the

Sparshanedriya, it can be controlled by Abhyanga. Indriya is a close contact of Manas, hence if Indriyas remain healthy, mind also automatically remains healthy. It gives positive effect on eyes.

3. Pratimarsha Nasya:- It is having special significance in preventing the age related eye diseases.

4. Abhyanga:- Advised for Drishtiprasadana, especially advised to apply on Shira and Pada.

5. Gandoosha: Tilataila can be used for this procedure.

6. Mukhalepa:- Advised to restore the power of vision only in day time. Remove the medicine before drying.

7. Sirolepa:- Advised in Shirorogas, Shirokapalarogas, Netrarogas.

Moordhataila Advised for Indriyaprasadana, evening is ideal time for Moordhatail as especially Shirodhara, Pichu and ShiroBasti.

CONCLUSION

Aging is a physiological process that affects every system of the body. Vision is one of the functions most severely affected in the geriatric age group. Acharya Vagbhata has said that all– out efforts should be made by men to protect the eyes throughout the period of life; for the man he is blind the world is useless, the day and night are the same even though he may have wealth. So if we improve eye sight thereby we are improving the quality of life and helping in graceful aging.

***

DEAFNESS

Dr. Vinod Yadav
Final year PG Scholar.
RSBK Department.
Guided by :-
Dr. Anil Nagle

Introduction:-

Presbycusis (also spelled presbyacusis, from Greek presbys "old" + akousis "hearing"), or age-related hearing loss, is the cumulative effect of aging on hearing. It is a progressive and irreversible bilateral symmetrical age-related sensorineural hearing loss resulting from degeneration of the cochlea or associated structures of the inner ear or auditory nerves. The hearing loss is most marked at higher frequencies. Hearing loss that accumulates with age but is caused by factors other than normal aging (nosocusis and sociocusis) is not presbycusis, although differentiating the individual effects of distinct causes of hearing loss can be difficult.Presbycusis is the most common cause of hearing loss, afflicting one out of three persons by age 65, and one out of two by age 75. Presbycusis is the second most common illness next to arthritis in aged people.

Symptoms:-

1) Primary symptoms:

sounds or speech becoming dull, muffled or attenuated need for increased volume on television, radio, music and other audio sources difficulty using the telephone loss of directionality of sound difficulty understanding speech, especially women and children difficulty in speech discrimination against background noise (cocktail party effect).

2) Secondary symptoms:

hyperacusis, heightened sensitivity to certain volumes and frequencies of sound, resulting from "recruitment" tinnitus, ringing, buzzing, hissing or other sounds in the ear when no external sound is present

Causes

The aging process has three distinct components: physiologic degeneration, extrinsic damage (nosocusis), and intrinsic damage (sociocusis). These factors are superimposed on a genetic substrate, and may be overshadowed by general age-related susceptibility to diseases and disorders.

Hearing loss is only weakly correlated with age. In preindustrial and non-industrial societies, persons retain their hearing into old age.In the Framingham cohort study, only 10% of the variability of hearing with age could be explained by age-related physiologic deterioration. Within family groups, heredity factors were dominant; across family groups, other, presumably sociocusis and nosocusis factors were dominant.

Heredity: factors like early aging of the cochlea and susceptibility of the cochlea for drug insults are genetically determined.

Oxidative stress

General inflammatory conditions

Sociocusis

Sociocusis is the condition of those who have hearing loss attributed to continuous noise exposures, unrelated to their job or occupation. This exposure to these stimuli is frequent, and are often considered common "background noises" that affect the hearing abilities of individuals.

Examples of sociocusis-related stimuli are the continuous noises from traffic, home appliances, music, television, and radio. The accumulated exposure to these noises over many years can lead to a condition similar to pure presbycusis.

Nosocusis

Nosocusis factors are those that can cause hearing loss, which are not noise-based and separate from pure presbycusis. They may include:-

- Ototoxic drugs: Ingestion of ototoxic drugs like aspirin may hasten the process of presbycusis.

Vascular degeneration

- Atherosclerosis: May diminish vascularity of the cochlea, thereby reducing its oxygen supply.

- Dietary habits: Increased intake of saturated fat may accelerate atherosclerotic changes in old age.
- Smoking: Is postulated to accentuate atherosclerotic changes in blood vessels aggravating presbycusis.
- Diabetes: May cause vasculitis and endothelial proliferation in the blood vessels of the cochlea, thereby reducing its blood supply.
- Hypertension: causes potent vascular changes, like reduction in blood supply to the cochlea, thereby aggravating presbycusis.

However, a recent study found that diabetes, atherosclerosis and hypertension had no correlation to presbycusis, suggesting that these are nosocusis (acquired hearing loss) factors, not intrinsic factors.

Pathophysiology

Examples of microscopic changes seen in this condition are hair cell degeneration of the cochlea and giant stereociliary degeneration.

There are four pathological phenotypes of presbycusis:

1. Sensory: characterised by degeneration of the organ of Corti, the sensory organ for hearing. Located within the scala media, it contains hair cells with stereocilia, which extend to the tectorial membrane. The organ's outer hair cells play a significant role in the amplification of sound and is extremely sensitive to external and internal factors. If the outer hair cells are damaged, they do not regenerate. This results in a loss of sensitivity of hearing, as well as an abnormal perceived loudness in the aspect of the tonotopic spectrum that the damaged cells serve.

2. Neural: characterised by degeneration of cells of the spiral gganglion.

3. Strial/metabolic: characterised by atrophy of stria vascularis in all turns of cochlea.

Located in the lateral wall of the cochlea, the stria vascularis contains sodium-potassium- ATPase pumps that are responsible for producing the endolymph resting potential. As individuals age, a loss of capillaries leads to the endolymphatic potential becoming harder to maintain, which brings a decrease in cochlear potential.

4. Cochlear conductive: due to stiffening of the basilar membrane thus affecting its movement. This type of pathology has not been verified as contributing to presbycusis.

Diagnosis:

1. Otoscopy

An examination of the external ear canal and tympanic membrane performed by a medical doctor, otolaryngologist, or audiologist using an otoscope, a visual instrument inserted into the ear. This also allows some inspection of the middle ear through the translucent tympanic membrane.

2. Tympanometry

A test administered by a doctor of the tympanic membrane and middle ear function using a tympanometer, an air-pressure/sound wave instrument inserted into the ear canal. The result is a tympanogram showing ear canal volume, middle ear pressure and eardrum compliance. Normal middle ear function (Type A tympanogram) with a hearing loss may suggest presbycusis. Type B and Type C tympanograms indicate an abnormality inside the ear and therefore may have an additional effect on the hearing.

3. Laboratory testst

This may include a blood or other sera test for inflammatory markers such as those for autoinflammatory diseases.

4. Audiometry:-

5. Presbycusis audiogram

{Magnetic resonance imaging (MRI)}

Treatment:-

1. There are no approved or recommended pharmaceutical treatments for presbycusis.
2. Cochlear implant
3. Middle ear implants

Management:-

Hearing aids help improve hearing of many elderly. Hearing aids can now be tuned to specific frequency ranges of hearing loss.

Aural rehabilitation for the affected person and their communication partners may reduce the impact on communication. Techniques such as squarely facing the affected person, enunciating, ensuring adequate light, minimizing noise in the environment, and using contextual cues are used to improve comprehension.

***

PRESBYCUSIS

Dr. Yamini Nayak
Final year PG Scholar.
Guided by :-
Dr. R.G. Dole
Shalakya Tantra Department. M.S (Ayu)

Introduction:-

Presbycusis (also spelled presbyacusis, from Greek presbys "old" + akousis "hearing"), or age-related hearing loss, is the cumulative effect of aging on hearing. It is a progressive and irreversible bilateral symmetrical age-related sensorineural hearing loss resulting from degeneration of the cochlea or associated structures of the inner ear or auditory nerves. The hearing loss is most marked at higher frequencies. Hearing loss that accumulates with age but is caused by factors other than normal aging (nosocusis and sociocusis) is not presbycusis, although differentiating the individual effects of distinct causes of hearing loss can be difficult.Presbycusis is the most common cause of hearing loss, afflicting one out of three persons by age 65, and one out of two by age 75. Presbycusis is the second most common illness next to arthritis in aged people.

Symptoms:-

1) Primary symptoms:

Sounds or speech becoming dull, muffled or attenuated need for increased volume on television, radio, music and other audio sources difficulty using the telephone loss of directionality of sound difficulty understanding speech, especially women and children difficulty in speech discrimination against background noise (cocktail party effect).

2) Secondary symptoms:

Hyperacusis, heightened sensitivity to certain volumes and frequencies of sound, resulting from "recruitment" tinnitus, ringing, buzzing, hissing or other sounds in the ear when no external sound is present.

Causes

The aging process has three distinct components: physiologic degeneration, extrinsic damage (nosocusis), and intrinsic damage (sociocusis). These factors are superimposed on a genetic substrate, and may be overshadowed by general age-related susceptibility to diseases and disorders.

Hearing loss is only weakly correlated with age. In preindustrial and non-industrial societies, persons retain their hearing into old age.In the Framingham cohort study, only 10% of the variability of hearing with age could be explained by age-related physiologic deterioration. Within family groups, heredity factors were dominant; across family groups, other, presumably sociocusis and nosocusis factors were dominant.

Heredity: factors like early aging of the cochlea and susceptibility of the cochlea for drug insults are genetically determined.

Oxidative stress

General inflammatory conditions

Sociocusis

Sociocusis is the condition of those who have hearing loss attributed to continuous noise exposures, unrelated to their job or occupation. This exposure to these stimuli is frequent, and are often considered common "background noises" that affect the hearing abilities of individuals.

Examples of sociocusis-related stimuli are the continuous noises from traffic, home appliances, music, television, and radio. The accumulated exposure to these noises over many years can lead to a condition similar to pure presbycusis.

Nosocusis

Nosocusis factors are those that can cause hearing loss, which are not noise-based and separate from pure presbycusis. They may include

- Ototoxic drugs: Ingestion of ototoxic drugs like aspirin may hasten the process of presbycusis.

vascular degeneration

- Atherosclerosis: May diminish vascularity of the cochlea, thereby reducing its oxygen supply.

- Dietary habits: Increased intake of saturated fat may accelerate atherosclerotic changes in old age.
- Smoking: Is postulated to accentuate atherosclerotic changes in blood vessels aggravating presbycusis.
- Diabetes: May cause vasculitis and endothelial proliferation in the blood vessels of the cochlea, thereby reducing its blood supply.
- Hypertension: causes potent vascular changes, like reduction in blood supply to the cochlea, thereby aggravating presbycusis.

However, a recent study found that diabetes, atherosclerosis and hypertension had no correlation to presbycusis, suggesting that these are nosocusis (acquired hearing loss) factors, not intrinsic factors.

Pathophysiology

Examples of microscopic changes seen in this condition are hair cell degeneration of the cochlea and giant stereociliary degeneration.

There are four pathological phenotypes of presbycusis:

1. Sensory: characterised by degeneration of the organ of Corti, the sensory organ for hearing. Located within the scala media, it contains hair cells with stereocilia, which extend to the tectorial membrane. The organ's outer hair cells play a significant role in the amplification of sound and is extremely sensitive to external and internal factors. If the outer hair cells are damaged, they do not regenerate. This results in a loss of sensitivity of hearing, as well as an abnormal perceived loudness in the aspect of the tonotopic spectrum that the damaged cells serve.

2. Neural: characterised by degeneration of cells of the spiral gganglion.

3. Strial/metabolic: characterised by atrophy of stria vascularis in all turns of cochlea.

Located in the lateral wall of the cochlea, the stria vascularis contains sodium-potassium-ATPase pumps that are responsible for producing the endolymph resting potential. As individuals age, a loss of capillaries leads to the endolymphatic potential becoming harder to maintain, which brings a decrease in cochlear potential.

4. Cochlear conductive: due to stiffening of the basilar membrane thus affecting its movement. This type of pathology has not been verified as contributing to presbycusis.

Diagnosis

1. Otoscopy

An examination of the external ear canal and tympanic membrane performed by a medical doctor, otolaryngologist, or audiologist using an otoscope, a visual instrument inserted into the ear. This also allows some inspection of the middle ear through the translucent tympanic membrane.

2. Tympanometry

A test administered by a doctor of the tympanic membrane and middle ear function using a tympanometer, an air-pressure/sound wave instrument inserted into the ear canal. The result is a tympanogram showing ear canal volume, middle ear pressure and eardrum compliance. Normal middle ear function (Type A tympanogram) with a hearing loss may suggest presbycusis. Type B and Type C tympanograms indicate an abnormality inside the ear and therefore may have an additional effect on the hearing.

3. Laboratory testst

This may include a blood or other sera test for inflammatory markers such as those for autoinflammatory diseases.

4. Audiometry:-

5. Presbycusis audiogram

{Magnetic resonance imaging (MRI) }

Treatment:-

1. There are no approved or recommended pharmaceutical treatments for presbycusis.
2. Cochlear implant
3. Middle ear implants

Management:-

Hearing aids help improve hearing of many elderly. Hearing aids can now be tunedto specific frequency ranges of hearing loss.

Aural rehabilitation for the affected person and their communication partners may reduce the impact on communication. Techniques such as squarely facing the affected person, enunciating, ensuring adequate light, minimizing noise in the environment, and using contextual cues are used to improve comprehension.

Animals:-

Many vertebrates such as fish, birds and amphibians do not suffer presbycusis in old age as they are able to regenerate their cochlear sensory cells, whereas mammals including humans have genetically lost this ability. A number of laboratories worldwide are conducting comparative studies of birds and mammals that aim to find the differences in regenerative capacity, with a view to developing new treatments for human hearing problems.

***

KARNASRAVA WITH SPECIAL REFRENCE TO OTORRHOEA

Presented by- Dr. Harleen Kaur

G. Dole PG 1st year

Department of Shalakya tantra

Guided by- Dr. Rajeev.

Professor and H.O.D Department of Shalakya Tantra

Introduction:-

Shalakya tantra is one among the eight branches of Ayurveda. Shalakya tantra is a deep as ocean and is not possible to explain it completely even with any number of verses.

Karnashashukuli to collect sound waves Sent towards the Shrotra which is not seenby nacked eye (Shrotra is situated in mastishaka(brain)). Karna is originated from Akasha Mahahuta. Karnasrava is a disease mentioned by Acharya Sushruta in the chapter named Karnaroga Vigyaniya under twenty eight Karnarogas.

Nidana and Samprapti of Karna roga:

1) Stay in the Dew
2) Swimmimg in Water
3) Ithching in ear
4) Use of false instruments
5) Misuse of shalaka.

According to above cause vitiated vata distracted to own path, then its met to shira produced severe pain. As 28 karnagata roga explain in Sushruta Samhita.

Karnasrava:-

Discharge of Pus from vata affected ear may result from a head injury or due to immersion in water or else due to suppuration of an abscess. This is known as Karnastrava.

Treatment of Karnasrava:-

Treatment of karnastrava, putikarna and krumikarna should be carried out onsimilar karma and also by specific Yoga their cure.

- Pramarjana (cleansing) – Karpas pichu
- Irrigations – Triphala Kwatha,
- Fumigation – Vidanga + Haridra + Ghruta
- Filling- Medicated oil according to disease
- Errhines (Shirovirechana)– Vacha Churna

These therapies should be employed in these, considering the appropriate requirements of each case.

Specific Yoga for Karnasrava:-

- Irrigation of the ear should be undertaken with the decoction of drugs of Rajavrksadi group or the Surasadi group and the powder of these drugs should be used for insufflation.
- The decoction of the five drugs of Kashaya rasa combined with the juice of kapittha and honey, filled in the ear cavity, is advocated for a case ofkarnasrava

According to Shushruta Samhita we are using the above mentioned treatment. and for systemic treatment, According to Ayurveda we are using Triphala gugulu and Arogyavardini vati.

OTORRHOEA:- Definition :- Otorrhoea can be defined as *discharge from the ear* and may originate from the ear canal and middle ear.

It is often associated with hearing loss and there is frequently no pain associated. There is a spectrum of discharge, ranging from soft wax (yellow/white and mistaken for

pathological discharge) through clear, mucoid and frankly purulent fluid that may have an offensive odour.

Types of Otorrhoea: The ear discharge may profuse or scanty continuous or intermittent.

1) Serous Discharge may be due to eczematous otitis externa.

2) Mucoid or Mucopurulent discharge containing mucin is produced by mucosa ofthe middle ear in patients having perforated ear drum.

3) Purulent discharge may come from the lesions of external ear, middle ear or an abscess affecting the parotid gland or tem-poromandiular joint.

4) Foul smelling Discharge is often due to cholesteatoma.

5) Sanguineous discharge may be caused by a polyp, granulation, trauma ortumour.

6) Watery discharge is caused by cerebrospinal fluid otorrheoa.

Aetiology: Otorrhoea is sally due to the disease of ear but It may be due to a few other causes outside the ear.

Causes in the ear:-

1) **External Ear**:- Furunculosis , acute otitis externa.
   - Otomycosis
   - Granulomas
   - Myringitis
   - Wax with secondary otitis externa

2) **Middle Ear:-** Two main types, both causing otorrhoea and hearing loss and invariably associated with tympanic membrane (TM) defect

- otalgia is often not a feature
  - Chronic suppurative otitis media (tubotympanic)
- acute otitis media causes TM rupture resulting in mucopurulentdischarge.
- if inflammation persists and TM fails to heal, perforation remain(usually in the pars tensa) and there is recurrent mucoid discharge.
  - Chronic suppurative otitis media (attico-antral)

- long-standing Eustachian tube dysfunction may result in TMretraction or perforation in the attic region
- associated with cholesteatoma and scanty, offensive otorrhoea
- hearing loss often marked.

- Tumours (rare)

3) **Inner Ear:-** Suppurative labyrinthitis may indirectly add to otorrhoea causedby otitis media, which is the primary cause of labyrinthitis.

(A)Causes outside the ear:- Cerebrospinal fluid otorrhoea.

- Parotid Abscess rupturing into the external auditory canal.
- Temporomandibular joint abscess rupturing into the external auditorycanal.
- Swimming.

Investigations:-

1) Otoscopy (Ear examination)
2) Bacteriological examination of the discharge for smear, culture andantibiotic sensitivity.
3) Exfoliative cytology of the discharge if malignancy is suspected.
4) Tests of hearing (tuning fork test)
5) Radiological examination of the ear, CT Scan.
6) Biopsy
7) Routine Investigation for anaesthetic fitness.
8) Chemical examination for glucose and chlorides should be done in suspectedcases of C.S.F. otorrhoea.

Management:- General management of otorrhoea :- Aural toilet – The discharge may be mopped by swab sticks. The ear may also be cleaned by suction. Water should be prevented from entering the ear.

1) Systemic Analgesic and Antibiotics are prescribed if necessary.
2) Ear Drops – Antibiotic ear drops are not advised if there is perforation.

3) Ear drops are not advised for cerebrospinal fluid otorrhoea, as the drops may enter the cranial cavity. But we can use ear drop in otomycosis with intact TM. The common bacterial pathogen common in ear discharge that can cause an infection are:-Staphylococcus aureus, streptococcus pneumonia, Hemophilus influenza.

- Polymyxin B is effective against Pseudomonas, s.aureusand proteus spp.
- Chloramphenicol is effective against a wide range of organisms.
- The fluoroquinolones (ciprofloxacin and ofloxacin) are effective against streptococcus pneumonia, Haemophilus influenza.
- For Systemic treatment Cephalosporine Group antibiotic and Analgesic drugs are required.

Conclusion:-

The history and nature of the discharge often establish the diagnosis, however enquiring about ongoing otalgia, hearing loss, vertigo, or trauma may reveal red flag features and for similar reasons, as well as otoscopy.

Many of these patients can be managed in community but it is important to be able to recognise the need for referral to secondary care.

REFRENCES:-

1. Sushruta samhita-Editor Kaviraj Ambikadutta Shastri Published by Chaukhamba Sanskrit Samsthana, 2002.
2. Madhav Nidana With Madhukosha Tika-Editor Narendranath Shastri Motilal Banarasidas publication, 1979.
3. The short book of ENT diseases – Editor K.B. Bhargava, S.K Bhargava, T.M. Shah- Eleventh edition.
4. OTORRHOEA- Dr Rory Attwood, ENT Department, Tygerberg Hospital
5. The Discharging ear : A practical approach – Editor- R Y SEEDAT MB ChB, MMed (ORL), FCORL (SA) Specialist/Lecturer (Department of Otorhinolaryngology, Universitas Hospital and University of the Free State,

Bloemfontein)

6. Management of patients presenting with otorrhoea: diagnostic and treatment factors Peter Dannatt, MB BChir, MA, Foundation Year 2 Doctor and Patrick Jassar, FRCS Ed, FRCS (ORL-HNS), ENT Consultant (Br J Gen Pract. 2013 Feb; 63(607): e168–e170. doi: 10.3399/bjgp13x663253 PMCID: PMC3553644 PMID: 23561697)

***

GERIATRIC NASAL DISEASES AT GLANCE

Dr. Suwarna Chuadhary

Assistant Professor Shalakayatanatra Deaprtment, SMBT Ayurved College,

Dhamangaon, Nashik. Phd Scholar .

Guide – Dr Pushpalata Ingale,

Associate Professor, Shalakayatanatra Deaprtment, ASS Ayurved College Nashik

Abstract

प्राणा प्राणाि्रता यत्र श्रश्रता सिेच्न्द्रयाश्रण च|

यद् उत्तम अगां अंगांना श्रश्रर्ा तद् अश्रिश्रश्रयते| cha.su.17

As said by Charakaharya Shira, uttam anga means a very important part of the body because all indriya (dyanenendriya, karmendriya and ubhayendriya MANA) reside in it.

PRANA also resides there.While explaining the various ―Pariksha" in vimansthana ashtam adhyaya Charakacharya says that _VAYA' is one of the tool of examination of patient and there he mentioned JARAVASTHA

Defining JARAVASTHA Acharya said that there is INDRIYA HANI in JARAVASTHA. So, one of the important factors is that the health of INDRIYA must be taken care of for healthy ―JARAVASTHA "'.If we wish to keep INDRIYA healthy we must enter the SHIRA. Acharya had provided a key for the same.

ऊर्धिणजत्रु श्रिणकारे षु श्रविषान्नस्यश्रमष्यते I

नासा श्रश्र श्रश्ररसो द्ि्रारां तेन तद् व्याप्य च्न्द्र तान II अ.सां.स.ू २०-१

As Shira is important hence importance of its entry site is eternal for health of Shira and as a consequence of helathy JARAVASTHA. Hence care should be taken of this entry point we must have good knowledge of NASAL geriatric diseases hence efforts are taken in current paper for review of NASAL GERIATRIC DISEASES.

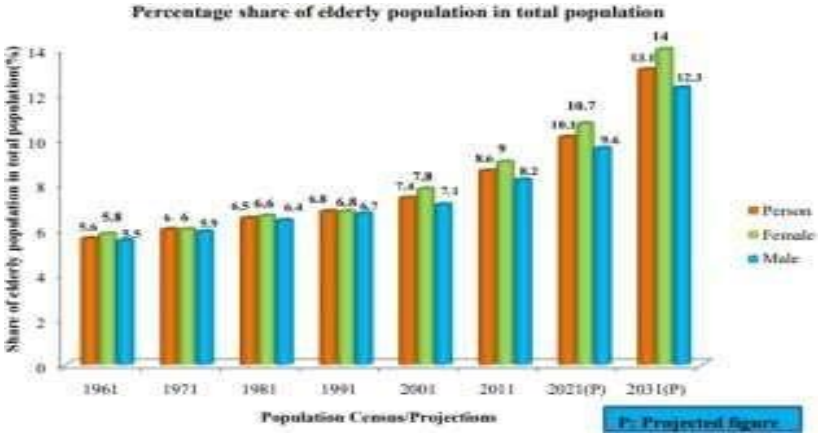
Introduction

Population ageing is a global phenomenon. With the passage of time, every country in the world is experiencing growth in the size and proportion of older persons in their population. Population ageing is an inevitable demographic reality that is associated with improvements in the health and medical care system. With longevity and declining fertility rates, the population of older persons (60 years and above) is growing faster than the general population globally. This phenomenon is known as population ageing. When population age increases rapidly, this has implications on the socioeconomic and health status of the elderly. (a) The International day of older persons is celebrated every year on 1st October.(a)

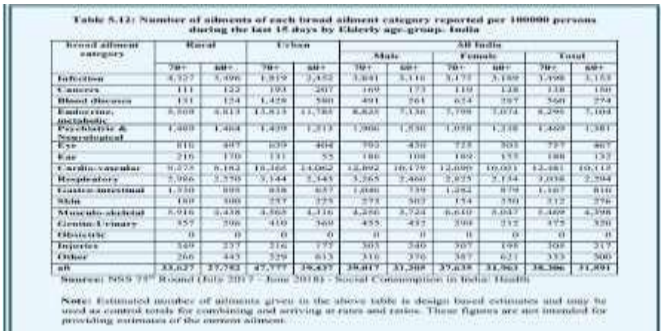
The World Health Organization (WHO) has considered 65 yrs. and above as geriatric age. In India, the parameter for geriatric age group has been accepted as 60 yrs. and above, in the ‗National Policy on Older Persons' adopted by the Government of India in January, 1999.In India the size of the elderly population, i.e., persons above the age of 60 years is fast growing, although it constitutes 7.4% of total population. (b) In Ayurveda also Jaravastha is explained after madhyamavastha. Limitations of madhyamavastha is upto 60 years. Jaravastha starts after that. Acharya also explained symptoms of Jaravastha (c) which are defining the Population ageing as we discussed previously. Hence overall we can consider geriatric age from 60 years but symptoms of population aging can also be considered as geriatric age group before 60 years age.

Literary Review:

"Elderly in India 2021‖ statistics declared by National Statistics office of Government of India 10. 1% of the population falls into old age.



Out of this person visited as patient of old age in year 2020 in Maharashtra state were 77%



Over all geriatric disease were enlisted above

Out of this 497 was suffering from ophthalmic diseases as 170 were suffering with otological complaints (a) No specific mentioning of rhino logical complaints in recent studies. But study in 2017 mentioned - problems related to nose in elder persons which were 13.03 %.(b)

Distribution of the diseases mentioned (b) We can observe that all the mentioned diseases have local pathology but it should be considered that the nose is the major installation site for various diseases falling in geriatric diseases .

SL.NO	Disorders of Nose	No of Patients	Total %	Nasal%
1	Epistaxis	179	4.90	37.60
2	Rhinosinusitis	80	2.18	16.80
3	Anosmia	51	1.40	10.71
4	Nasal mass	46	1.26	9.66
5	Nasal myiasis	44	1.20	9.24
6	Allergic Rhinitis	32	0.88	6.72
7	Dacryocystitis	27	0.73	5.67
8	Atrophic rhinitis	17	0.47	3.57
	TOTAL	476	13.03%	

As mentioned in ayurveda ऊर्धिणजत्रु means NETRA, KARNA, SHIRA, MUKHA & NASA VIVARA. Let‘s have look how the nose is important for ऊर्धिणजत्रु rogas

● उत्ऩाटयेत्तु ऱोमाश्रन नासायानां कदाचन I तदत्ु ऩाटनतो द्रष्ु टै दौि्ल्ण यां त्रिया ि्ि्ेत II ि्ा.प्र shows relation with eyes

● While explaining complications of pratishyaya ear and nose relation is explained by acharyas र् ाश्रश्रयिमान्ध्यम घ्राणां घोरा्ंश् च नयनामयान

सु.सू २४ – १७

• मातुराु गं ागमो ितण िन्णृ रदा इांश्रद्रयश्रिभ्रण मा् I च्ूून्यता श्रश्ररसश्चाश्रश्र मश्रू निगाढश्रिणरे श्रचते II सु.श्रन. – ४०- २८ Atiyoga of virechana nasya causes CSF leakage. Giddiness,shirah shoonyata, indriya kaaryahani showing how the nose relates with shira.

Modern science has established the relation of cribriform plate with nose. Danger area of the face – Nose – Cavernous sinus relation we are aware of. Well aromatherapy is an example of relation of emotions with nose and olfaction.

- Indu, the commentator for Ayurvedic epics, mentioned the exact sthana of the Shringataka Marma (i.e., Shiraso Antarmadhya Murdha) which can be considered for the Middle Cephalic Fossa which is connection with ethmoid and sphenoid sinuses, consists of meningeal vessels, mainly internal carotid arteries, cranial nerves (3rd, 4th, 5th and 6th). and also the optic nerve.
- The pituitary gland can be approached through the sphenoid sinus by transantral and transnasal routes. The sphenoidal sinus is inferiorly in connection with the Naso-pharynx and posteriorly with the brain stem.
- The above show the Shringataka Marma (structure consisting of four siras in connection with four sense organs and the nerves and vessels) can be related with the Middle Cephalic fossa.

Systemic relationship of Nose

- प्रश्रतश्याय िि ेत कासा्, कासात साजं ायत े या्II shows respiratory system relationship also COVID 19 had also supported the same.
- Vasomotor rhinitis occurs as a result of Autonomic nervous system dysfunction.
- Stimulation to the nasal mucosa with electrical impulses causes an increase in the heart rate.
- In Allergic rhinitis crave for eating spicy food shows a relationship with the elementary system.

- Nasya is the treatment of Jaundice mentioned in Charaka chikitsa.
- Vegavarodeha leads to pratishyaya showing relation with the excretory system.
- Nasal mucosa is the mirror of your emotional status.
- Epistaxis in Hypertension is a defence mechanism. If we try to stop the nasal bleeding, the brain will start bleeding.
- Stimulation to the nasal mucosa with electrical impulses causes an increase in the heart rate.
- Acharya Charaka (Scholar) has mentioned one specific anatomical structure named Munja-, which is like type of grass which acts like Ishika (i.e., like a painter‘s brush). This ―painter‘s brush‖ when instilled in the paint, absorbs the paint; in the same way the Munja structure attracts the doshas when stimulated by the particular drug.(Ref; Cha.Si. 2/ 22). The Munja structure can be thought for an olfactory bulb and the Ishika for the numerous neurons join together to form the olfactory tract.
- The olfactory transfer of drugs into the brain is thought to occur by either slow transport inside the olfactory nerve cells to the olfactory bulb or by faster transfer along the peri neural space surrounding the olfactory nerve cells into the cerebrospinal fluid surrounding the olfactory bulbs and the brain.
- Ol factory transfer could theoretically be used to deliver drugs that have a required effect in the central nervous system such as those for Parkinson‘s or Alzheimer‘s diseases, its advantages, if used for stem cell delivery in neurodegenerative diseases like multiple sclerosis has been proposed.
- Intranasal oxytocin is also being actively investigated for many psychiatric conditions including alcohol withdrawal, anorexia nervosa, autism, anxiety disorders, pain sensation and schizophrenia.
- Intranasal Calcitonin, calcitonin-salmon is used to treat Hypercalcaemia arising out of malignancy, Paget's disease of bone, post menopausal and steroid induced

osteoporosis, Phantom limb pain and other metabolic bone abnormalities, available as Rockbone, Fortical and Miacalcin Nasal Spray.

- More recently interest is developing on delivery of a number of peptides and other drugs to the nose for direct transport into the brain to treat neurodegenerative disorders such as Alzheimer's. Intranasal insulin is being investigated for treatment of neurodegenerative disorders such as Alzheimer's disease.
- Intranasal Ketamine, commonly being used for the treatment of breakthrough pain in patients with chronic pain is now becoming an area of significant research interest for the treatment of bipolar disease and major depressive disorder with early results suggesting a strong and prolonged antidepressant effect following a single sub dissociative dose (50 mg) of ketamine.
- Skin and buccal and nasal mucous membranes may have use as alternate routes of analgesic and anesthetic delivery. Similar developments with other compounds have produced a plethora of new devices, concepts, and techniques that have together been termed controlled-release technology (CRT).
- The great interest in mucosal vaccine delivery arises from the fact that mucosal surfaces represent the major site of entry for many pathogens. Among other mucosal sites, nasal delivery is especially attractive for immunization, as the nasal epithelium is characterized by relatively high permeability, low enzymatic activity and by the presence of an important number of immunocompetent cells.
- In addition to these advantageous characteristics, the nasal route could offer simplified and more cost-effective protocols for vaccination with improved patient compliance. The use of nanocarriers provides a suitable way for the nasal delivery of antigenic molecules. Besides improved protection and facilitated transport of the antigen, nanoparticulate delivery systems could also provide more effective antigen recognition by immune cells. These represent key factors in the optimal processing and presentation of the antigen, and therefore in the subsequent development of a

suitable immune response. In this sense, the design of optimized vaccine nanocarriers offers a promising way for nasal mucosal vaccination.

Discussion:

We can say for the control of geriatric diseases the nose is the best site though local nasal geriatrics diseases are less. For cure and control we can use NASYA chikitsa on a daily basis from a very young age hence JARAVASTHA will be healthier.

Conclusion :

Nose is the important organ for the maintenance of health not only in the JAravastha but for each individual who is diseased and healthy too.

REFERENCES:

A. http://mospi.nic.in/sites/default/files/publication_reports/Elderly%20in%20India%202021.pdf

B. An Overview of Otorhinolaryngeal Problems in Geriatrics

C. https://drive.google.com/drive/folders/1l4tSfwyJ6ETP9PCzESvXsw7PV8j8NNqq?usp=sharing

***

GUEST PAPERS

APPLICATION OF AYURVEDIC CONCEPTS IN GERIATRIC DISEASES

***Dr. Pundareekaksha Rao,**

*Associate professor,

****Dr. Neethu.K.S.,**

**Assistant professor,

*****Dr. Jeeva.P**

***Assistant professor,

Ayurveda College, Coimbatore, T.N. - 641402, India.

ABSTRACT:

As per current knowledge, ageing is the irreversible natural stage of human life. Avurveda has considered Jara (Aging) as a natural and inevitable process. Synonyms used for Jara are Vardhakya, Vrudha, Visrasa, Jarjara. The World Health Organization (WHO) definition of geriatric age is 65 years and above. The elder population is growing faster than other category of population. Understanding the mechanism of aging and ENT diseases and search for novel remidies against it could be one of the most fascinating and pounding topic. Due to low immunity, derangements of Dathu in elder people are common to get diseases. Vata dosa is aggravating in old age and because of that are trend to get Vatavikara easily. Ear, nose and oral diseases are also very common in geriatric people. Few common geriatric ENT diseases are Badirya, Karnanadha, Karnagudha, Dustapratisyaya, Agranatha, Arasgnatha, Talusosha, Arbuda, Svarabheda etc. Implementation of Ayurvedic principles and Rasayana chikisa can be adapted in geriatric ENT diseases for better results.

KEYWORDS: Geriatric, Jara, Vatavikara, Badirya, Rasayana

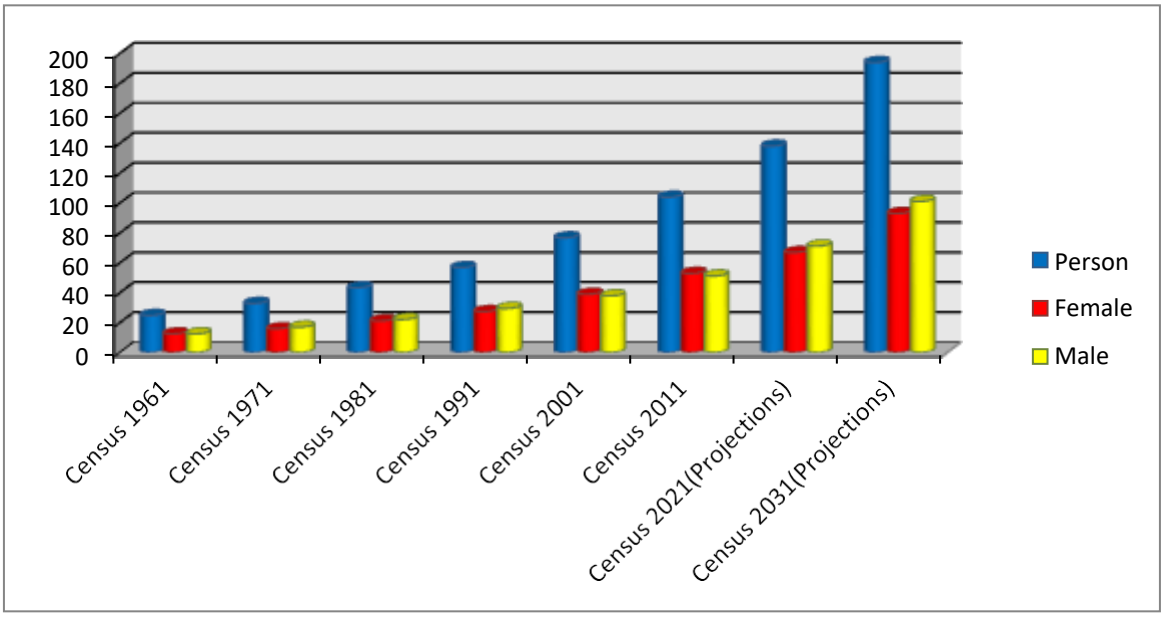
BACKGROUND:

As per current knowledge, ageing is the irreversible natural stage of human life. Avurveda has considered Jara (Aging) as a natural and inevitable process as well as a Swabhavajavyaddhi. The term Jara means the muscles and other tissues are loosened under the influence of aging. Synonyms used for Jara are vardhakya,

vrudha, Visrasa, jarjara.1 Further vardhakya is classified into two types as Kaalaja/Parirakshanakrita (timely aging) and Akaalaja/Aparirakshanakrita (early aging).2

The World Health Organization (WHO) definition of geriatric age is 65 years and above. Indian standard geriatric age is 60 years and above adopted from _National policy on older persons‘ formulated by the government in January, 1999.3 The elder population is growing faster than other category of population (child, young adult) globally is known as population ageing. Increasing longevity and decreasing fertility lead to rising numbers of elder people in the population. Population ageing has significant impact on economies, societies and the environment. Aging bring many psychological, behavioural and attitudinal changes in them. Loss of physical strength and stamina become more acute as a person grow older. According to the National Statistical Office (NSO)‘s Elderly in India 2021 report, India‘s elderly population (aged 60 and above) is projected to touch 194 million in 2031 from 138 million in 2021, a 41 per cent increase over a decade.4 Kerala has the current highest elderly population (16.5%) followed by Tamil Nadu, Himachal Pradesh. Bihar, Uttar Pradesh and Assam have the least, according to National Statistical Office report.

Graph 1: Elderly Population (aged 60 years and above) in India (In millions)



Source: Population Census Data and Report of the Technical Group on Population Projections November 2019, Population Projections for India and States 2011-2036, Census of India 2011

MATERIALS AND METHODS:

Ayurvedic classics were searched and treatment approaches were compiled. The diseases developed, concepts and treatment principles of old age are discussed on the bases of available data.

DISCUSSION:

Four out of five patients with more than 65 years of age refer at least one chronic condition, many of whom presenting more than one associated condition. Such patients frequently use multiple medications and are more susceptible to their adverse effects.5,6 With growing age, elder persons experience various anatomical and physiological changes in the Ear, nose and throat as well. Hence there is a constant demand for newer and more efficacious treatments in the field of geriatric diseases.

GERIATRIC OTOLOGICAL PROBLEMS:

WHO reports which showed high prevalence of otological disorders in south Asian and Saharan African countries in about one third of elderly population7 Approximately one-half of adults over age 85 have hearing impairment8 Hearing loss (Presbycusis) and increased cerumen production with aging contribute to difficulty hearing. The prevalence of hearing loss increases as a function of age and accumulating risk factors and has a high association with reduced quality of life.9 Study of Mohanta et al.10 In a Indian population of 3563 over the age of 60 years showed otological problems in 51.77% of population in total. In this presbycusis was the highest in incidence with 34.21%, CSOM in 8.98%, otitis externa in 8.02%, tinnitus in 6.54%, Wax in 3.06%, ASOM in 2.13%, otomycosis in 2%, Retracted Tympanic Membrane in 1.64%, Vertigo in 1.54% and Maggots in 0.13%. Geriatric changes include hair cell loss, loss of cochlear neurons, atrophy of striavascularis and central loss due to degradation of executive function leading to high frequency sensorineural hearing loss.11

RHINOLOGY PROBLEMS:

Geriatric nasal diseases are least common when compared to ear and throat.

Epistaxis (Nasal bleed) is one of the most common geriatric complaint. Which is developed due to age induced vascular changes, high prevalence of hypertension and atherosclerosis and drying of nasal cavity.12

Anosmia due to ageing can happen, due to decline in number of receptor cells, thinning of olfactory epithelium, decrease of olfactory bulb size. Finally it leads to loss of smell perception in elders.

Maggots in nose of elders can develop due to improper maintenance of hygiene and atrophic changes in nose.

ORAL, THROAT AND LARYNGIAL DISEASES:

Geriatric oral diseases include Xerostomia, laryngopharyngeal reflux, mucositis, dysgeusia, snoring, dysphagia, hoarseness of voice etc. speech and swallowing problems developed due to abnormal relaxation of cricopharyngeal muscle, loss of tone in vocal cords, diminished collagen synthesis.

Table1 – Common Geriatric Otorhynoloryngeological Problems:

S.No	Organ	Disease
1.	**Otological problems**	Presbycusis CSOM Otitis externa Tinnitus Wax ASOM Otomycosis Retracted Tympanic Membrane Vertigo Maggots
2.	**Rhinological problems**	Nasal obstruction, Rhinorrhoea, Epistaxis Anosmia Maggots In Nose
3.	**Oral cavity problems**	Xerostomia, Laryngopharyngeal Reflux, Mucositis, Dysgeusia, Snoring, Dysphagia, Hoarseness Of Voice

Common Ayurvedic geriatric ear diseases are Vatajakarnasoola, Badirya, Karnakshveda, Karnanada, Karnaguda, Karnasrava, Karnakandu, Karnaarbuda, Karnaarshas etc. According Acharya Vagbhata badirya (hearing impairment) developed in Bala, Vridha, Chirakalina (longstanding) are difficult to treat with limited Ayurvedic protocol.13 Common geriatric nose diseases includes Dushtapratisyaya, Kshavadhu, Apinasa, Aghranatha, Nasapaka, Nasasosha, Nasaarbuda. Common geriatric oral diseases are Arasagnatha, Mukhasosha, Vatajaoshtakopa, Krimidantha, Chaladantha, Danthaharsha, Danthanadi, Jihwakandaka, Valaya, Talusosha, Taluarbuda, Swaragna etc

MANAGEMENT OF GERIATRIC ENT DISEASES:

According to Susrutha, Jara is Swabhavabalapravrutha Vyadhi occurred due to kalaparinama and is Nispratikriya (not responded with treatment).14 But according to Yogaratnakara treatment should be strictly adopted without any fail even in the chronic diseases still end of the life.15 common treatment principles of ear nose and oral diseases are implimented in geriatric diseases but vayah anusara have to chage the dose, potency, frequency of adaptation medicines, quantity of medicines used for procedures etc have to reduced accordingly. In classics ayurvedic scholors have mentioned vaya also considered while giving treatment to the patients.

While explaining the Samanyachikitsa of Karnaroga, Acharaya has explained Rasayana and later clarifies it as –Mamsarasenasahabhojana‖ and he advices the Ghrithapana as Uttarabakthika (After food). Since in Vardhakya there is predominance of Vatadosha, Brihmana-Snighda Chikitsa can be adopted and the regimens prescribed for Vatajakarnasoola, Pranada, Badhirya and Karnasveda follow a similar pattern. Snehapana and Abhyanga (Bahyasneha), Pindasveda, Ghrutapana at night in empty stomach and drink milk after it, Snigdhavirechana with Eranda taila, Murdhabasti, Nasya with Satapakabala Taila. Karnapoorana with Kantakari Sidha Ksheera and Kukkuta Vasa can be adapted.16 Nasaparisosha is explained where Ghranasrithasleshma is dried up by Vata and Pitta and can be correlated to the drying up of mucous in the nasal cavity in the elderly and treated it like Nasya with Ksheerasarpi or Anuthaila. Sarpipaanam after food along with Mamsabhojana is advised.17Nasyakarma with Anutaila can be adapted in all geriatric nasal diseases except in Ama stage. Vatajapratisyaya is one of the common Rhinological diseases in elderly people. In Vatajapratisyaya, Vidarigandhadi Gana Sidha Ghritha Paana is explained.18 Elder peoples are easily

get headache due to Vata aggravation. In Vatajasiroroga, Seka with Ksheera, Sirolepa with Payasa, Snehananasyam, Snehikadhoomapana can be done.19

AYURVEDIC PRINCIPLES FOR GERIATRIC CARE

Ayurvedic concepts which are explained in Ayurvedic classics can be adopted in the elder people. Few concepts are listed below.

- Procedures contraindicated in Vardhakya are Vamana, Ksharakarma, Agnikarma are contraindicated in elderly above 70 yrs. The dose of Niruhavasti after the 70 yrs is to be given in 8 Anjalipramana.
- After 80 yrs of age Nasyakarma is contraindicated but Pratimarsanasya can be adopted till end of the life as per needed. So while doing Panchakarma we have to keep all the points in the mind.
- There is no contra indication for the Rakthamokshana. Acharya Susrutha told to do Rakthamokshana in Bala, Kumara, Vridha, Stree and Sukumara with Trikurchika instrument.
- The curd is not to be taken in night time because it increase the age early.
- Acharya Sharanghadara mentioned dose for the 70 yrs person is 16 Masa and it is reduced by 1 Masha every year.
- All the medicines which is adopted in the old age are should be in the easily palatable.

RASAYANA

Rasayana is the specialised technique of Ayurveda, which stop and reverse the ageing. Acharya Charaka has mentioned ten Vayasthapana drugs, which can prevent the aging process in his Sadvirechanasatasrateya adyaya of Sutrastana. The drugs are listed below

Table 2 – Vayasthapana Dravya [20, 21]

S. No	*VayasthapanaDravya*	Latin name
1	*Amrita*	Tinospora cordifolia *(Willd) Miers*
2	*Abhaya*	Terminalia chebula *Retz*
3	*Dhatri*	Emblica officinale *Linn*
4	*Mukta*	Pluchea lanceolata

5	*Shweta*	Clitoria ternatea *Linn*
6	*Jeevanti*	Leptadenia reticulata
7	*Atirasa*	Asperagus racemosus
8	*Mandukaparni*	Centella asiatica
9	*Sthira*	Desmodium gigenticum
10	*Punarnava*	Boerhaavia diffusa *Linn*

In the text of Bhaishajyaratnavali given Bhringarajadi Choornam as a Rasayana to reverse the age. Bhringarajachoorna, Tila, Amalaki, should be taken along with Sarkara can stop the ageing.22

Table -3 Patyapatya 23,24

S.No	***Rogas***	***Pathya***	***Apathya***
1.	***Karnaroga***	*Godhuma, Shali, Mudga, Yava, Patola, Shigru, Rasayana, Brahmacharya, Abhashana, Swedana, Virechana, Vamana, Nasya, Dhuma, Siravyadha*	*Sleshmala guru ahara, Dantakashta, Shirasnana, Vyayama, Thusharasevana, Karnakandu*
2.	***Nasaroga***	*Puranayava, Shali, Kulattha, Mudga, Yusha, Shigru, Balamulaka, Lashuna, Dadhi, Trikatu, Sweda, Sneha, Shirobhyanga*	*Dravayuktaahara, Snana, Krodha, Shakrunmutravegadharana, Bhumishayya*
3.	***Mukharoga***	*Yava,Trunadhanya, Yusha, Mudga, Kulatha, Jangalarasa, Karavellaka, Patola, Balamulaka, Taptambu, Kadhira, Ghruta, Ksharanna*	*Amlarasa, Guru abhishyanda, Anupamamsa, Matsya, Dadhi, Ksheera, Guda, Masha, Rukshanna, Katinanna, Dantakashta, Snana, Adhomukhashayana, Divanidra*

Conclusion

A thorough study of the Ayurvedic approach to understanding and dealing with ENT diseases can potentially help us o discover new approaches o manage ENT diseases in elders.

REFERENCES:

1. Raja radhakanth, Sabdhakalpadruma, Srivarprasadavasu; et.al, Naga publishers, New delhi 3rd Edition. Dwitiyakanda,Pp.517.
2. Acharya Charaka, CharakaSamhitha, Translated by RK Sharma,Chokhamba Sanskrit Series Office,Varanasi,2008, Sareerasthana, 1/110-112, Pp 338.
3. Jeyalakshmi S, Chakrabarti S, Gupta N. Demography of aging population in India. Situation Analysis of The Elderly in India (Govt. of India, Gazette). vol. 1; 2011. Pp. 4–9. Available from: http://mospi. nic.in/sites/default/files/publication_reports/elderly_in_india.pdf.
4. NSO (2021), Elderly in India, National Statistical Office, Ministry of Statistics & Programme Implementation, Government of India, New Delhi. https://mospi.gov.in/web/mospi/reports-publications.
5. Bora H, Bandyopadhyay SN, Basu SK, Majhi PK. Geriatric problems in otolaryngology. J Indian Med Assoc. 2004 Jul;102(7):366, 368, 370.
6. Onzotto G, Koffi-Aka V, Yotio A, Ehouo F, Adjoua B, Bamba M. Oto-rhino-laryngology and geriatrics in the Ivory Coast. Rev LaryngolOtolRhinol (Bord). 2002;123(2):119-23.
7. WHO Expert committee. Health and functional status. Health Elder. 1989;779:14–7
8. Desai M, Pratt LA, Lentzner H, Robinson KN. Trends in Vision and Hearing Among Older Americans. Aging Trends. Hyattsville, MD: National Center for Health Statistics; (2001). [PubMed] [Google Scholar].
9. Davis A, McMahon CM, Pichora-Fuller KM, Russ S, Lin F, Olusanya BO, et al. Aging and hearing health: the life-course approach. Gerontologist (2016) 56(Suppl 2):S256–67.10.1093/ geront/gnw033 [PMC free article] [PubMed] [CrossRef] [Google Scholar]

10. Mohanta GS, Behera SK, Mallik KC, Swain S, Rautray S, Baliarsingh P, et al. An Overview of Otorhinolaryngeal Problems in Geriatrics. Int J Gerontol. 2018;12(2):139–43. doi:10.1016/j.ijge.2017.10.002.

11. Joseph BN. Disorders of aging. In: Saumil N, Joseph B, editors. Schuknecht‘s Pathology of the Ear. 3rd edn. USA: People‘s Medical Publishing Home; 2010. p. 431–76.

12. Pyakurel M, Bhatta R, Pokharel R. Otorhinolaryngological Problem in Geriatric Population. Nepalese J ENT Head Neck Surg. 2014;5(2):23– 5.

13. Prof. Jyotirmitra, Astanaga Sangraha with Sasilekha Sanskrit Commentary by Indu, edited by Shivaprasad Sharma, Uttarastana Chapter 22 Verse 26. Chaukamba Sanskrit series office, Varanasi. 3rd edition 2012.

14. Kavirajkunjalalbhishagratna, editor. Susrutha, the Susruthasamhita, Uttarastana, Chapter 15, Bharat Mihir Press, Calcutta: 1916.

15. Yogaratnakara with vaidyprabha hindhi comment By dr. Indradev tripathi, dr. Daya Shankar tripathi, 4th edition, Chowkhamba krishnadas academy,Varanasi, 2013.

16. Kavirajkunjalalbhishagratna, editor. Susrutha, the Susruthasamhita, Uttarastana, Chapter 21, Verse 5-8, Bharat Mihir Press, Calcutta: 1916.

17. Kavirajkunjalalbhishagratna, editor. Susrutha, the Susruthasamhita, Uttarastana, Chapter 24, Verse 11, Bharat Mihir Press, Calcutta: 1916.

18. Kavirajkunjalalbhishagratna, editor. Susrutha, the Susruthasamhita, Uttarastana, Chapter 24, Verse 25, Bharat Mihir Press, Calcutta: 1916.

19. Kavirajkunjalalbhishagratna, editor. Susrutha, the Susruthasamhita, Uttarastana, Chapter 26, Verse 5-9, Bharat Mihir Press, Calcutta: 1916.

20. Agnivesha, Charak Samhita, sutrasthana, Chapter 4, Rashtrita Sanskrita Sansthan, New delhi, reprint 2006;

21. J.L.N.Sastry, Illustrated dravyaguna vijnana, volume 2, Chowkhamba orientalia, Varanasi, 2008.

22. .kaviraja govindha das sen, Baisajyaratnavali, Edited by Prof. Sidhanandana misra, Chapter 73, Verse 28-29, Published by Choukamba surabharati prakashan, Varanasi. 2019.

23. Yogaratnakara with vaidyprabha hindhi comment By dr. Indradev tripathi, dr. Daya Shankar tripathi, 4th edition, Chowkhamba krishnadas academy,Varanasi, 2013.

24. Murthy KR Srikantha, editor, Vagbhata‘s Ashtanaga Hridayam, Text with English translation 5th edition, Vol. II. Chapter 22, Verse 110, Chaukhamba Krishna das academy; Varanasi, 2003

***

GERIATRICS OPHTHALMOLOGY

Dr. Saudhan Desai
MBBS, MS (Ophthalmology).
Assistant Professor,
Parul Institute of Medical Sciences & Research.
Parul University, Vadodara, Gujarat.

GERIATRICS:- _Senior citizen‘ or _Elderly as a person who is of age 60 years or above.

Geriatrics or Geriatric Medicine: Specially that focuses on health care of elderly people.

Aims to promote health by preventing and treating diseases and disabilities in older adults.

HEALTH PROBLEMS IN OLD PERSONS:-

About 64 per thousand elderly persons in rural areas and 55 per thousand in urban areas suffer from one or more disabilities.

Most common- Loco motor disability 3%

Hearing disability 1.5% Bindness (1.7% in rural areas, and 1% in urban areas)

PROBLEM STATEMENT:- Visual impairment is important health problem in elderly.With advancing age normal visual function decreases and there is increase in ocular pathology. Untreated visual disturbance lead to increased incidence of fails, depression, social isolation and dependency Active screening for visual impairment should be a part of health examination.Elderly should have visual assessment 1-2 yearly for early detection and prevention of permanent visual impairment.

VISUAL IMPAIRMENT:-

The m/c causes:-Age-related Cataract 52%

ARMD Non Exudative -25% Exudative 5%

Glaucoma 2-10%* Diabetic Retinopathy

Incidence rates increase with increasing age.

According to WHO:- Visual impairment <6/18-6/60, Severe visual Impairment 6/60-3/60z Bind 3/60-1/60

VISUAL IMPAIRMENT IS DUE ANY OF THE FOLLOWING CAUSES:-Loss of transparency of Optical Media like: Cornea-Ulcer / Scar / Opacity / Degeneration / Dystrophy / Dry EYE

Lens- Cataract / Dislocation Subluxation

Vitreous-Degeneration / Haemorrhage

Retinal Layers-DR / ARMD / HTN

Loss of Normal Architecture- DR / Glaucoma /

ARMD, High Refractive Errors-Myopia Hyperopia,Presbyopia

OPTHALMOLOGICAL PROBLEMS IN ELDERLY:- Other than Blindness

Ocular Surface Diseases: Blepharitis, Entropian / Ectropion, Pterigum, Dry Eye, Corneal Ulcer or Keratitis, Corneal, Degenration, Corneal Dystrophy, XANTHELESMA

They are creamy yellow lipid deposit near the medial canthus at upper or lower eyelid.They represent lipid deposit in histiocytes in dermis of skin of lids. Mostly seen in middle aged women Associated with Diabetes and High cholesterol level

ENTROPION:- Inward turning of eyelid margin

Symptoms due to trichiasis - rubbing of eyelashes on cornea and conjunctiva leads to FB sensation, Photophobia, Pain and lacrimation.It can be Cicatrical Spastic

Senile / Involutional Mechanical

ECTROPION:- Outward tumning of eyelid margin Epiphora is the main complaint

Mild photophobia andirritation due to chronic conjunctivitis It can be Cicatrical SenileParalytic Spastic Mechanical

ARCUS SENILIS:- Bilateral, Superior and,inferior quadrant.

Annular ring of lipid infiltration at corneal periphery.

PTERYGIUM:- It is triangular encroachment of vascularized granulation tissue covered by conjunctiva in inter-palpeberal area.

Bilateral, nasal induce astigmatism

Treatment: Excision with autograft

CORNEAL ULCER:-Infection of cornea due to organism causing necrosis and pus.

Symptom: Pain, lacrimation, photophobia, blurring of vision, redness

Treatment: Antibiotics topical, Homatropine,

HERPES SIMPLEX KERATITIS

Infection of cornea with Herpes simplex virus.

Skin lesions associated with corneal punctate/ stromal keratitis.Pain, photophobia, lacrimation

Treatment: Antiviral CORNEAL BLINDNESS

In elderly corneal degeneration and dystrophy are common which leads to corneal opacity and scarring.

Treatment: Keratoplasty

PRESBYOPIA

Caused due to hardening or sclerosis of the lens substance, or loss of ciliary muscle and choroidal elasticity.The lens gradually becomes thicker and loses its flexibility over time resulting in failure to accommodate light from objects of various distances.

Difficulty in near vision...reading fine prints.

Treatment: Spectacles

CATARACT:- A cataract is a clouding or capacity that develops in the crystalline lens of the eye or in its envelope, varying in degree from slight to capacity and obstructing the passage of light.It is leading cause of vision loss in elderly.

Symptoms : foggy, blurred vision

Colour perception may also be affected.

Driving at night may be difficult as

They experience glare from oncoming headlights especially for those with posterior subcapsular cataract.If a patient has an associated refractive error, double vision in one eye or monocular diplopia may be a feature.

STAGING OF CATARACT FORMATION

Stage 1 :- Stage of Lamellar Seperation

Stage 2 :- Incipient Cataract

Stage 3 :- Intrumescent Cataract

Stage 4 :- Immature Cataract

Stage 5 :- Mature Cataract

Stage 6 :- Hypermature Cataract

Hypermature Sclerotic Cataract

Hypermature Morgagnian Cataract

RISK FACTORS FOR CATARACTS:- Diabetes mellitus, Smoking, Excessive alcohol, Trauma (blunt and penetrating), Family history, Exposure to sunlight/ultraviolet B radiation Steroid therapy ,Uveitis

TREATMENT:- Modern cataract surgery is very safe and can be performed as an outpatient procedure under local anaesthesia.

The techniques commonly applied are extracapsular cataract extraction and phacoemulsification with intraocular lens implantation.

GLAUCOMA:- Glaucoma is defined as progressive optic neuropathy resulting in a characterstic appearance of the optic disc and a specific pattern of irreversible visual field defects that are associated frequently but not invariably with raised intraocular pressure (IOP).Prevalence is about 3-4% in patients above 70 yrs. Significant cause of blindness in the world.

PATHOGENESIS:-There is obstruction to aqueous outflow at trabecular meshwork.

It results in increased IOP which causes mechanical damage to retinal ganglion cells.

Raised IOP causes microcirculation stasis which leads to impairment of nutrients and gluatamate toxicity.Symptoms in POAG is Headache, eyeache Visual field

defect - peripheral loss of visionFrequent changes in presbyopic glasses Delayed Dark adaptation

PACG –Acute red eye.

Pain, severe headache, redness, blurred vision, colored halos, raised IOP due to angle closure seen on Gonioscopy.

VISUAL FIELD DEFECT IN GLAUCOMA:-

INTRAOCULAR PRESSURE:-

Normal range 11- 21 mmHg It is measured using Tonometer.

It is only modifiable factor. Therefore all treatment modalities are based on controlling IOP.

TREATMENT OF GLAUCOMA:-

Medical ➢ Topical:Beta blockers

Carbonic anhydrase inhibitor , Alpha 2 agonist , Prostaglandin analogue, Pilocarpine

Surgical:- Argon Laser , Trabeculoplasty, Filtering surgery

Syestemic: Mannitol20% IV, Acetazolamide

DIABETIC RETINOPATHY:-

It is the ‒disease of retina‖ caused by microangiopathy because of chronic hyperglycemia which leads to progressive dysfunction of retinal blood vessels.

Initially DR is asymptomatic, if not treated then it can cause low vision or blindness

RISK FACTOR FOR DIABETIC RETINOPATHY:-

Duration of Diabetes most important

Glycemic control

Systemic factors - control (Blood pressure, lipid levels, Blood urea, serum creatinine)

Anemia

Smoking

Pregnancy

CLASSIFICATION

Non Proliferative Diabetic Retinopathy

(NPDR)

Proliferative Diabetic Retinopathy (PDR)

Hallmark :- Neovascularization

NON PROLIFERATIVE DIABETIC

RETINOPATHY (NPDR)

Features :- Microaneurysm, dot-blot hemorrhages, venous changes (beading, looping, sausaging), Cotton wool spots (aka soft exudates), hard exudates, IRMA (intra retinal microvascular anomaly) and flame shaped retinal hemorrhages

4-2-1 rule

Retinal hemorrhages in 4 Quadrants

Venous changes in 2 Quadrants

IRMAS in I Quadrant

Any 1 change → Severe NPDR

Any 2 change → Very Severe NPDR

PROLIFERATIVE DIABETIC

RETINOPATHY (PDR)

Hallmark :- Neovascularization

Neovascularization of Disc (NVD) :- On Disc or 1 DD around disc:Neovascularization elsewhere on retina (NVE) Beyond 1 DD

Vitreous

Neovascularization in Iris (NVI)

Complications of PDR: Advanced Diabetic Eye Disease, Vitreous hemorrhage, Tractional Retinal Detachment, Neovascular Glaucoma

MANAGEMENT OF DIABETIC RETINOPATHY:-

HYPERTENSIVE RETINOPATHY:-

Refers to fundus changes occuring due to HT

Grading of hypertensive retinopathy

Keith and Wegner (1939)

Grade I : It consists of mild generalized arteriolar attenuation, particularly of small branches, with broadening of the arteriolar light reflex and vein concealment.

Grade II : It comprises marked generalized narrowing and focal attenuation of arterioles associated with deflection of veins at arteriovenous crossings

Grade III : Grade Il changes plus copper-wiring of arterioles, banking of veins distal to arteriovenous crossings, tapering of veins on either side of the crossings and right-angle deflection of veins. Flame-shaped haemorrhages, cotton-wool spots and hard exudates are also present.

Grade IV : Grade III changes plus silver-wiring of arterioles and papilledema

AGE RELATED MACULAR DEGENERATION

Risk factor: Ageing, Sunlight, Smoking

Deficiency of vitamin - A, C, E

TREATMENT:- Dry ARMD :- Antioxidant

Wet ARMD :- intra vietral anti vegf

***