A REVIEW ON JARA- AVASTHA AND GERIATRIC CHANGES IN CHAKSHURENDRIYA (EYES)

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ABSTRACT
Aging is a complex phenomenon, a sum total of changes that occur in a living organism with the passage of time and lead to decreasing ability to survive, stress, increasing functional impairment and growing probability of death. An important concept not widely appreciated is the distinction that must be made between the normal attrition of function occurring in all persons with advancing age and the loss of function that marks the onset of pathological changes from one or more of the disease encountered with increased prevalence in the older age group. Failure to recognize this difference can lead to progressive disability from treatable diseases in many cases. The specific physical, physiological and psychological changes in relation to ageing process have been described in ayurvedic literature. In Sushruta samhita several physical and mental symptoms have been described as a consequence of ageing process. It includes Dhata- kshaya (degeneration of tissues), Indriya- kshaya (deterioration of sense organs), Bala- kshaya (loss of physical strength and body immunity), Virya- kshaya (decreased sexual power), Utsaha-kshaya (loss of motivation), Vali (wrinkles), Palitiya (graying of hair), Khaaliya (baliness), Kasa and Swasa (cold, cough and asthma) and Klishita (inability to perform mental and physical work). Acharya Vagbhatta and Sharangdhara have described the characteristic feature of decade wise changes both in psychic and somatic condition brought about by ageing process. All ayurvedic texts had told about eleven Indriyas in which five are gyanendriya, five are karmendriya and the last one is ubhayendriya mana. This paper will focus a light on changes on chakshurendriya(eyes) according to age as per ayurveda and modern texts.

KEYWORDS: Jara, Indriyas, Gyanendriyas, Karmendriyas, Ubbayendriya, Indriya- kshaya, Chakshurendriya.

INTRODUCTION
Ayurveda is one of the oldest recognized system of medicine, originated from Vedas. Ageing is considered as vardhakya avastha in ayurveda. Lord Dhanvantari is prayed to mitigate the fear of ageing, pain and death. Ageing is defined under the name of jaravastha, jara, vardhakya etc. in ayurveda. Acharya charak says, in Shareera continuous destruction takes place which leads to ageing or jaravastha. Jara is a swabhavik vyadhi which suggests that it is incurable. Acharya Susruta told about the five swabhavik vyadhi – jara, mrityu, kshudha, pipasa, nidra. Ayurveda accepts ageing as a natural phenomenon and is categorised under the heading of naturally occurring diseases. Swabhava (nature) and kala (time factor) are accepted as causative factor for the same.[1]

Geriatrics definition
1) Geriatrics or geriatric medicine, is a speciality that focuses on health care of elderly people. It aims to promote health by preventing and treating diseases and disabilities in older adults.[2]

2) The branch of medicine concerned with the diagnosis, treatment and prevention of disease in older people and the problems specific to ageing.[3]

3) A branch of medicine that deals with the problems and diseases of old age and the medical care and treatment of ageing people.[4]

Many geriatric syndromes have multiple causes, multiple targeted interventions may be a more realistic approach than trying to find a cure. For ex. Dizziness is often multi factorial in older adults. Successful treatment may involve correcting vision, prescribing physical therapy focused on strength and balance and reducing sedating medication, in contrast to a narrow focus on one problem.

The structure of brain is constantly changing from birth through out life time, meaning that normal ageing, free from dementia, is associated with structural brain changes. During ageing the brain shrinks in volume and the ventricular system expands in healthy ageing. However the pattern of changes is highly heterogenous,
with the largest changes seen in frontal and temporal cortex, and in the putamen, thalamus and accumbens.\textsuperscript{[5]}

Brain is main manager of our body which regulates many functions of our body, change in brain’s anatomy and physiology leads to many symptoms and disorders with ageing.

Gyanendriyas are having so much importance in our body, which also get affected with ageing and reduction in their function can be seen easily in old age.

**DISCUSSION**

Ageing is a complex phenomenon, a sum total of changes that occur in a living organism with the passage of time and lead to decreasing ability to survive stress, increasing functional impairment and growing probability of death. There are many theories of ageing in modern science.

**Common Geriatric conditions and diseases**\textsuperscript{[9]}

1) Urinary tract infection in long term care
2) Hearing loss
3) Hearing loss and cognitive assessment
4) Vestibular dysfunction
5) Rheumatoid arthritis
6) Chronic kidney diseases
7) Presbyopia- the ageing voice
8) Parkinsonism diseases
9) Osteoarthritis
10) Multiple myeloma
11) Osteoporosis
12) Hypertension
13) Aortic stenosis
14) Heart failure
15) Diabetes
16) Insomnia
17) Tremors
18) Shoulder problems
19) Peripheral arterial diseases
20) COPD with heart disease and diabetes etc.

<table>
<thead>
<tr>
<th>Age related macular degeneration</th>
<th>Blurred vision, Image distortion, Central scotoma, Difficulty in reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glaucoma</td>
<td>Visual field loss, Blurred vision (late)</td>
</tr>
<tr>
<td>Cataract</td>
<td>Blurred vision, Glare, Monocular diplopia</td>
</tr>
<tr>
<td>Diabetic retinopathy</td>
<td>Blurred vision, Floaters, Visual field loss, Poor night vision</td>
</tr>
</tbody>
</table>

In an study of age grp. 62 (+-10) it is found that\textsuperscript{[7]}

96.4% refractory disorders
33.6% myopia
45.9% hyperopia
16.8% astigmatism
17.4% diabetes

Other symptoms were found are\textsuperscript{[7]}

Temporal headache 28.9%

Red eye 37%
Different eye 26%
Flash 41.2%
Dry eyes 27.3%
Discharge of eye 28%
Eyesight problem 31.1%
Colour vision deficiency 4.7%
Family history of colour vision deficiency 3.8%

In ayurveda acharya vagbhata and sharangadhav have told the hrasha krama of different factors with ageing (specialy every 10 years increase in age). In that hrasha krama they have told the hrash in different gyanendriyas also.

According to above all discussion gyanendriyas also go to decrease in their function and karmendriyas also with ageing. Chakshurendriyas goes to decrease in their function at the age of 60 yrs according to ayurveda. If chakshurendriyas get decrease in their function before 60 or other indriyas before it’s time then the cause is akalaj jara(early ageing) and the reason behind it is due to our improper diet, routine etc.

Approximately one person in three has some form of vision- reducing eye disease by the age of 65.\textsuperscript{[6]} The most common causes of vision loss among the elderly are age-related macular degeneration, glaucoma, cataract and diabetic retinopathy. Age related macular degeneration is characterised by the loss of central vision. Primary open angle glaucoma results in optic nerve damage and visual field loss. Because this condition may initially be asymptomatic, regular screening examinations are recommended for elderly patients. It is most prevalent form of glaucoma. Cataract is common cause of vision impairment among the elderly, but surgery is often effective in restoring vision. It is most common cause of blindness worldwide. Diabetic retinopathy may be observed in the elderly at the time of diagnosis or during the first few years of diabetes. It is leading cause of new blindness among middle aged Americans. It is also a significant cause of morbidity in the elderly population. Patient should undergo eye examinations with dilation when diabetes is diagnosed and annually thereafter. It’s prevalence rises with increasing duration of diabetes.\textsuperscript{[7]}

www.ejpmr.com
Among total patients\(^7\)

Glaucoma  4.5%
Macular degeneration  3.3%
Hypertension  21.7%
Visual acuity  36.2%
Light perception  1.7%
No light perception  0.22%
Finger count  2.7%

Refractive errors, cataract and amblyopia were most important eye disorders in older people.

**CONCLUSION**


In ayurveda there is description of kshaya in chakshurendriya at the age of 60 or more than 60 but if it comes early then can be called as akalaj jara or early ageing which may be due to our improper diet and life style. In modern science it is near about 65 (similar to the ayurvedic theory). 35.8% of the studied population had at least one of the four diseases (age related macular degeneration, cataract, glaucoma, diabetic retinopathy).\(^8\)

These four diseases are more common in old age in these days.

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