RESEARCH ARTICLE

A MULTIDIMENSIONAL APPROACH TO ARMD - A CASE REPORT.

Dr. Shrikanth Kulkarni R¹, Dr. Sharada H¹ and Dr. Ahalya S².

Abstract

**Introduction:** A common chronic, progressive, degenerative disorder of a critical region of Retina called Macula, that affects older individuals over 60 years and with features of central vision loss as a result of abnormalities in the photoreceptors cells often resulting in Geographic atrophy or Neovascularization. There is no direct reference in Ayurvedic classics, depending upon the Clinical features can be compared to Vataja Timira.

**Purpose:** There is no satisfactory treatment in modern science, so this study has been done to point out Ayurveda treatment protocols in ARMD to give a better solution.

**Methods:** A 70 year old patient presented with chief complaints of bilateral blurring and central vision loss since 2 years, wavy vision, appearance of black spot and flashes of light since 6 months in both eyes.

**Discussion:** Ayurveda advocates significant role in the management ARMD (Dry). Here therapeutic approach has been done to slow down vision loss by Snigdha Virechana, Nasya, Tarpan, along with internal medications.

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**Introduction:**
Age Related Macular Degeneration accounts for 8.7% of all blindness worldwide, and it is the third most commonest cause of visual impairment¹. Its prevalence in India is 1.1% in south and 4.7% in north. Its prevalence is likely to be increased from 3 million to 6 million by the year 2020¹. This could be due to a decline in avoidable blindness, due to anterior segment pathologies, and increasing life expectancy of the global population.

The dry form of ARMD (Atropic or non-exudative) is the most commonest form (90%) and usually progresses slowly with characteristic soft drusen (63 microns or larger) and changes in pigmentation of the RPE; which can advance and cause vision loss.

**Ayurvedic Views**
In ARMD (Dry type) the clinical features are pertaining to visual disturbances like-
1. Distorted or blurred vision.
2. **AŚUŚÉLÉÉHIÉ** – Vataja Timira
3. Difficulty in doing fine tasks.

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4. Outer world looks variegated and confused/difficulty in identifying faces (due to loss of central vision) – Sannipatjamira

5. Vataja Timira – Metamorphosia

6. Blurrness of vision

The above mentioned features are explained in Dristigatarogas explained by Acharya Sushruta and by considering these references; ARMD (Dry type) can be taken as one of the Dristigataroga

**CHIKITSA:**

Based on the involvement of dosha, Snehana, Raktamokshana, Nasya, Anjana, Moordhabasti, basti, Tarpana, lepa and Seka are to be administered.

External procedures like Takra dhara and shirolepa which is srotorodhahara, is adopted to reduce sanga and siragrant and also to reduce the risk of further kaphakopa. Age related macular degeneration (ARMD) is a degenerative disease associated with aging that affects the macula and causes gradual loss of central vision, which is needed for seeing objects clearly in day to day activities. The disease is most often clinically apparent after 50 years of age and is considered to be the leading cause of blindness in the developed and developing countries.

**Materials and methods:**

A case report:

1. Patient Name : Mr. Rajashekar
2. Age : 70 years
3. OPD No : 3847
4. Sex : Male
5. Religion : Hindu
6. Address : Bengaluru

**Chief complaints:**

Blurring and Central vision loss in both Eyes since 2 years.

**Associated Complaints:**

1. Wavy vision since 6 months in both eyes.
2. Perception of black spot in the field of vision since 6 months in both eyes.
3. Flashes of light since 6 months in both eyes.

**History of present illness:**

A 70 year old patient came to Shalakya Tantra OPD, GAMC, Benagluru, with chief complaints of bilateral blurring and central scotoma since 2 years along with wavy vision, black spot in the field of vision and flashes of light in both eyes since 6 months. Patient was diagnosed as Bilateral Dry ARMD previously.

**History of past history:**

Hypertensive since 12 years, under medication.

**Past Ocular History:**

Patient underwent Cataract surgery to right eye 2 years back.

**Personal History:**

Chain smoker since 30 years.

**Family history:**

Nothing contributory.
Examination:

**Table 1:** Extra ocular examination:

<table>
<thead>
<tr>
<th>Structure</th>
<th>Right Eye</th>
<th>Left Eye</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye ball</td>
<td>Normal</td>
<td>Normal</td>
</tr>
<tr>
<td>Eye lid</td>
<td>Normal</td>
<td>Normal</td>
</tr>
<tr>
<td>Eye lashes</td>
<td>Normal</td>
<td>Normal</td>
</tr>
<tr>
<td>Lacrimal apparatus</td>
<td>Normal</td>
<td>Normal</td>
</tr>
<tr>
<td>Conjuctiva</td>
<td>Normal</td>
<td>Normal</td>
</tr>
<tr>
<td>Sclera</td>
<td>Normal</td>
<td>Normal</td>
</tr>
<tr>
<td>Cornea</td>
<td>Normal</td>
<td>Normal</td>
</tr>
<tr>
<td>Anterior chamber</td>
<td>Normal depth</td>
<td>Normal depth</td>
</tr>
<tr>
<td>Iris</td>
<td>Normal pattern</td>
<td>Normal pattern</td>
</tr>
<tr>
<td>Pupil</td>
<td>3mm, reactive</td>
<td>3mm, reactive</td>
</tr>
<tr>
<td>Lens</td>
<td>Transparent</td>
<td>Mature cataact</td>
</tr>
<tr>
<td>IOP</td>
<td>14mmHg</td>
<td>12mmHg</td>
</tr>
</tbody>
</table>

**Table 2:** Fundus Examination:

<table>
<thead>
<tr>
<th>Examination</th>
<th>Right Eye</th>
<th>Left Eye</th>
</tr>
</thead>
<tbody>
<tr>
<td>Media</td>
<td>Clear</td>
<td>Hazy</td>
</tr>
<tr>
<td>Optic disc</td>
<td>0.3 cupping</td>
<td>0.3 cupping</td>
</tr>
<tr>
<td>Macula</td>
<td>Drusen ++</td>
<td>Drusen ++</td>
</tr>
<tr>
<td>Blood vessels</td>
<td>Normal</td>
<td>Normal</td>
</tr>
</tbody>
</table>

**Table 3:** Visual Activity Before Treatment:

<table>
<thead>
<tr>
<th></th>
<th>Distant vision</th>
<th>Near vision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Without glass</td>
<td>With glass</td>
</tr>
<tr>
<td>OD</td>
<td>6/18</td>
<td>6/6p</td>
</tr>
<tr>
<td>OS</td>
<td>6/18</td>
<td>6/6p</td>
</tr>
<tr>
<td>Pin hole</td>
<td>No improvement</td>
<td>_</td>
</tr>
</tbody>
</table>

**Treatment given:**
1. Snigdha virechana with Trivrt leham 30 gms with luke warm water
2. Nishamalaki churna 1tsf -0-1tsf 30 days
3. Triphala guggulu 1-0-1 for 7 days
4. T. Chandraprabha vati 1-0-1 for 7 days
5. Kachuradi lepam E/A to eye 7 days
6. Katakaphala drops -2^0-0-2^0 for 7 days
7. Pratimarsha Nasya with Jeevantyadi taila 2^0-0-2^0
8. Tarpana with shathahwadi ghrita for 7 days

**Table 4:** Effect Of Treatment On Visual Acuity

<table>
<thead>
<tr>
<th></th>
<th>Distant vision</th>
<th>Near vision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Without glass</td>
<td>With glass</td>
</tr>
<tr>
<td>OD</td>
<td>6/9</td>
<td>6/6p</td>
</tr>
<tr>
<td>OS</td>
<td>6/9</td>
<td>6/6p</td>
</tr>
<tr>
<td>Pin hole</td>
<td>No improvement</td>
<td>_</td>
</tr>
</tbody>
</table>

**Results And Outcome:**

<table>
<thead>
<tr>
<th>Subjective Parameters</th>
<th>Objective Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOV</td>
<td>Visual acuity</td>
</tr>
<tr>
<td>Metamorphosia</td>
<td>OCT</td>
</tr>
</tbody>
</table>
Discussion:
1. ARMD is degenerative disease associated with aging that affects macula and causes gradual loss of central vision.
2. ARMD can be compared with Vataja Timira on the basis of laxanas.
3. Kriya kalpas not only improves the circulation but also provides micronutrients to the macula there by preventing the deterioration of retina and optic nerve.
4. As ARMD occurs in old age and there is degeneration and loss of neural tissue, as old age is associated with predominance of vata and also neural tissue is considered as a component of vata in the body.
5. The “Shathahwadi ghrita ” is one among the Timira hara yoga explained in Astangha Hrudhayam, Timira Pratisedha Adhyaya. This Drug contains shathawa, kustha, Nalada, Ashwagandha, Yasti, Prapaundrika, Sarala, Pippali, and Devadaru. The drugs of shathahwadi ghrita having Madhura, Tikta, kashaya properties Guru,Tiksha, gunas and ushna, katu veerya and Madhura Vipaka. By these rasa panchakas, we can understand that the lyophilic action of ghrita facilitates the transformation of drug to the target organ finally reaches the cell because the cell membrane also contains lipids. The corneal epithelium is permeable to lipid soluble substances; moreover, the medicine used for Tarpana is mainly Ghrita. Ghrita has high levels of antioxidants which can reduce the damage of thinned cornea by allowing more tissue contact time and bioavailability of the drug from the corneal surface.
6. Acharya Charaka has quoted as SNEHO ANILAM HANTI,i.e in order to pacify the vata dosha snehana is the best. He also mentioned Akshi Tarpana as one of the 24 Snehapraavcharana in Sutrasthana 13th chapter.
7. Ghrita is the best among all Jangama Sneha drayvas and acts as Balavardhaka, Ojovardhaka, Vayasthapana, Agni deepana and Dhatuposhaka.
8. Ghrita contains approximately 8% lower saturated fatty acids which makes it easily digestible. It contains vit A, Vit E and β carotene which are anti-oxidants and are helpful in reducing ketone bodies and prevents the oxidative injury to the body. Mainly Vit A keeps the epithelial tissue of the body intact, keeps the outer layer of the eyeball moist and prevents blindness.

Mode Of Action Of Tarpana

![Diagram of Mode Of Action Of Tarpana]
Conclusion:
ARMD is an age related disease of worldwide prevalence. Certain risk factors which may affect age of onset or progression include hereditary, nutrition, smoking, hypertension, and exposure to sunlight. Ayurveda provides natural and cost effective ways of improving and maintain health of eyes. The medicines which were used in the treatment Dry ARMD are rich source of vitamins and antioxidants and these have significant role in the treatment of ARMD. Ayurveda medicines prevent a deterioration of the Retina as well as the optic nerve, and provide micronutrients to the macula which transmits the sensation of vision to the brain. The disease cannot be cured completely, but can be well controlled.

Bibliography: