ABSTRACT

From historical point of view it is evident that Ayurvedic drugs and procedure based therapies are exceedingly used in alleviating wide range of ocular conditions. Shalakya-tantra-the core engrossing specialty of Ayurveda, deals with management of ocular illness and has been significantly contributing to the eye care. In this study is an attempt has been made to present the data on healthcare seeking behavior and utilization pattern among the patients attending Ayurvedic ophthalmic and treatment facility located at Ayurveda Central Research Institute of (a CCRAS Research Institute), New Delhi, for various eye maladies. The data generated during the period 2010 -2015 repossessed from the records, annual reports and analyzed by using appropriate scientific methods and presented. The study revealed preference of the patients towards Ayurveda for chronic and refractory ocular illness such as retinitis pigmentosa, age related macular degeneration, diabetic retinopathy including other diseases of retina, glaucoma, optic neuropathy etc. Further the pattern of follow-ups and year wise attendance pattern of patents are indicative of growing interest towards Ayurveda based eye care. Such
information would certainly provide an insight on perception of users of Ayurveda approaching for ophthalmic services.

**KEY WORDS:** Ayurveda, *shalakyatantra*, eye diseases, healthcare seeking attitude.

**INTRODUCTION**

In India, traditional health care is delivered through largest system with fully functional network of registered practitioners, research institutions and licensed pharmacies. Ayurveda, Yoga, Naturopathy, Unani, Siddha and Homoeopathy (AYUSH) are rationally recognized systems of medicine and have been integrated into the national health delivery system. Of these, Ayurveda is the most ancient medical system with an impressive record of safety and efficacy.\[^1, 2\] There is a growing recognition, nationally and internationally, of the need for incorporating the contributions of these systems of health knowledge into the dominant one to meet the limitations of modern medicine. A study on Role of AYUSH and Local Health Traditions under National Rural Health Mission (NRHM) in 18 states across India, implications of the NRHM strategy of mainstreaming AYUSH were studied. The pivotal outcomes and perceptions conclude that 80-90% households aware about utility of AYUSH and Local health traditions(LHTs), co-located services are well utilized in some states, preference was for chronic illness followed by acute illness and health promotion.\[^3, 4\]

Ophthalmology (*shalakyatantra*) is one among the eight clinical specialties of Ayurveda deals with management of eye diseases including all other disorders of head and neck. Eye maladies and Ayurvedic cures are known to all, but their impact is yet to be felt and recognized by both medical fraternity and public in general. Despite of tremendous research and utilization of advancements of various sciences and technology, problems retained with management of conditions such as retinitis pigmentosa, glaucoma, degenerative-neuro-ophthalmic lesions, chronic allergic disorders of adnexa etc. have remained unsolved since decades. Considering this it becomes imperative to develop and explore the hidden medical knowledge for better management of such ocular conditions.\[^5\]

Ayurveda offers comprehensive safe and effective approaches to manage such conditions. Abysmally, several traditional aboriginal ophthalmic practices have been fundamentally dilapidated for want of tangible evidence on safety and efficacy; call for scientific research and validation. Ayurveda portray distinct concepts and principles of management of eye diseases and efforts being made to generate evidence efficacy of its approaches.\[^6, 7, 8, 9\]
Certain clinical studies could able to generate scientific evidence on efficacy, extent of use, and effectiveness of drugs and therapies for surface lesions of the eye, allergic conditions, refractive errors well as neuro-ophthalmic conditions such as Age Related immature Cataract\cite{10}, Chronic Simple Glaucoma\cite{11,12,13,14}, Diabetic Retinopathy\cite{15}, Retinitis-Pigmentosa\cite{16}, Age related Macular degeneration\cite{17}, Dry Eye Syndrome\cite{18,19}, Abnormal Involuntary Movements of Eye\cite{20}, Pain management in ocular conditions\cite{21}, Myopia\cite{22}, Allergic Conjunctivitis\cite{23,24}, Viral Conjunctivitis\cite{25}, Simple conjunctivitis\cite{26,27} Further the ‘caksusya–rasayana’ (preservation and promotion of ocular health) approach of Ayurveda certainly provide safe and clinically effective ophthalmic drugs having diversified effects may be judiciously used to tackle intractable problems of the eye.\cite{5}

The Ministry of AYUSH, Govt. of India (formerly Department of AYUSH, Ministry of Health and family Welfare) emphasizes on mainstreaming the potential and core specialties of AYUSH systems. The Central Council for Research in Ayurvedic Sciences (CCRAS) in collaboration with Sreedhareeyam Eye Hospital and Research Centre, Kerala has initiated an Ayurvedic Ophthalmic Treatment and Research Facility located at Ayurveda Central Research Institute, functioning since February, 2010. The center is extending out-patient based health care services for eye diseases and conducting Ayurvedic ocular procedure based therapies (kriyakalpas) where ever required.\cite{28,29,30}

**OBJECTIVES**

The objective of the study was to assess the attitude and utility of Ayurveda for eye diseases among the patients using the services in an Ayurvedic Ophthalmic and Treatment and Research Facility located at Ayurveda Central Research Institute, New Delhi.

**METHODOLOGY**

Retrospective analysis of data of 828 patients who approached ‘Ayurvedic ophthalmic treatment and research facility’ during the period 2010 to 2015, was done to assess healthcare seeking attitude among them.

**OBSERVATIONS**

The study demonstrates age wise, gender wise data, distribution of major ocular illness, pattern of follow-ups, change in the pattern of attendance among the patients (n=828) who attended Ayurvedic Ophthalmic Treatment and Research Facility over the period of five years (2010-2015). A total of 828 cases of both the genders and the age group between 10-90
years were studied. The Observations indicate that 540 (65.2%) cases were males and 288 (34.8%) were females (fig-1). The gender wise distribution of patients is clearly described in fig.1.

A Maximum numbers of 155 (18.72%) cases were distributed in the age group of 21-30 years, while only 6 (0.72%) patients were found in the age group ranging from 81 to 90 years (fig.2).

Major ocular illness noticed among the patients comprise; retinitis pigmentosa 192 (23.19%) followed by cases of myopia 136 (16.42%), age related macular degeneration 84(10.14%), diabetic retinopathy 60 (7.24%), diseases of retina 54(6.52%), glaucoma 49(5.91%), optic neuropathy 39(4.71%) and 31(3.74%) of the cases were diseases of cornea . 183(22.10%)
cases include other diseases of adnexa, surface lesions etc. distributed below 5 numbers per disease. (table-1).

Table-1 Major ocular illness noticed among the patients approached at Ayurvedic Ophthalmic Treatment and Research Facility, New Delhi (n=828)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Ocular illness</th>
<th>No. of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Retinitis Pigmentosa</td>
<td>192(23.19%)</td>
</tr>
<tr>
<td>2.</td>
<td>Myopia</td>
<td>136(16.42%)</td>
</tr>
<tr>
<td>3.</td>
<td>Age Related Macular Degeneration</td>
<td>84(10.14%)</td>
</tr>
<tr>
<td>4.</td>
<td>Diabetic Retinopathy</td>
<td>60(7.24%)</td>
</tr>
<tr>
<td>5.</td>
<td>Diseases of Retina</td>
<td>54(6.52%)</td>
</tr>
<tr>
<td>6.</td>
<td>Glaucoma</td>
<td>49(5.91%)</td>
</tr>
<tr>
<td>7.</td>
<td>Optic Neuropathy</td>
<td>39(4.71%)</td>
</tr>
<tr>
<td>8.</td>
<td>Diseases of Cornea</td>
<td>31(3.74%)</td>
</tr>
<tr>
<td>9.</td>
<td>Others (distributed below 5 numbers per disease include diseases of adnexa, surface lesions etc.)</td>
<td>183(22.10%)</td>
</tr>
</tbody>
</table>

The pattern of follow-ups among the patients approached at Ayurvedic Ophthalmic Treatment and Research Facility reveals, 272(32.85%) cases out of 828 patients had at least one follow-up visit during the treatment period. Out of 192 cases of retinitis pigmentosa, a maximum number of 131 patients turned for follow-ups, followed by 15 patients out of 136 cases of myopia, 14 out of 84 cases of age related macular degeneration and 11 patients out of 60 cases of diabetic retinopathy were attended for followed up visits (Fig. 3).

Further the year wise distribution of the attendance pattern of the patients approached at Ayurvedic Ophthalmic Treatment and Research Facility indicate an increasing trend over the
period of five years (2010-2015) excluding the data of only two months i.e. January to February in the year 2015. (Fig-4).

RESULTS AND DISCUSSION
Response obtained from analysis of data revealed the patient’s fondness towards Ayurveda for chronic and refractory ocular illness such as retinitis pigmentosa, age related macular degeneration, diabetic retinopathy, diseases of retina, glaucoma, optic neuropathy etc. Furthermore the pattern of follow-ups and distribution of year wise attendance pattern of patients are indicative of increasing interest towards Ayurveda based eye care. However large multi-center studies across the country with a representative population and sample size are the need of the hour to appreciate the healthcare seeking tendency for Ayurveda based eye care in particular.

Even though the encouraging responses from some clinical studies are indicative of efficacy of Ayurvedic approaches in ophthalmic care, tangible evidence generated from basic studies on mechanism of action of Ayurvedic ophthalmic drugs and procedures (kriyakalpas) followed by planed clinical studies on safety and efficacy are vital to mainstream these practices. To assess the ground situation, a thorough appraisal followed by meta-analysis of research outcome is essential. Studies to examine the extent of use of standalone Ayurveda approaches, utility these approaches as add-on/adjunct to conventional therapies and drug interactions are pivotal to translate the knowledge into practice. A systems approach may be adopted to validate the Ayurvedic therapies and approaches with integration of principles of Ayurveda and bio-medicine without losing the core fundamentals of these
systems. Such an approach with well designed research plans could possibly facilitate to generate concrete evidence with greater translational potential.

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