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TO STUDY CLINICAL FACTORS RELATED TO VISION DISTURBANCE AND IN MANAGEMENT OF DRISHTIGATROGAS

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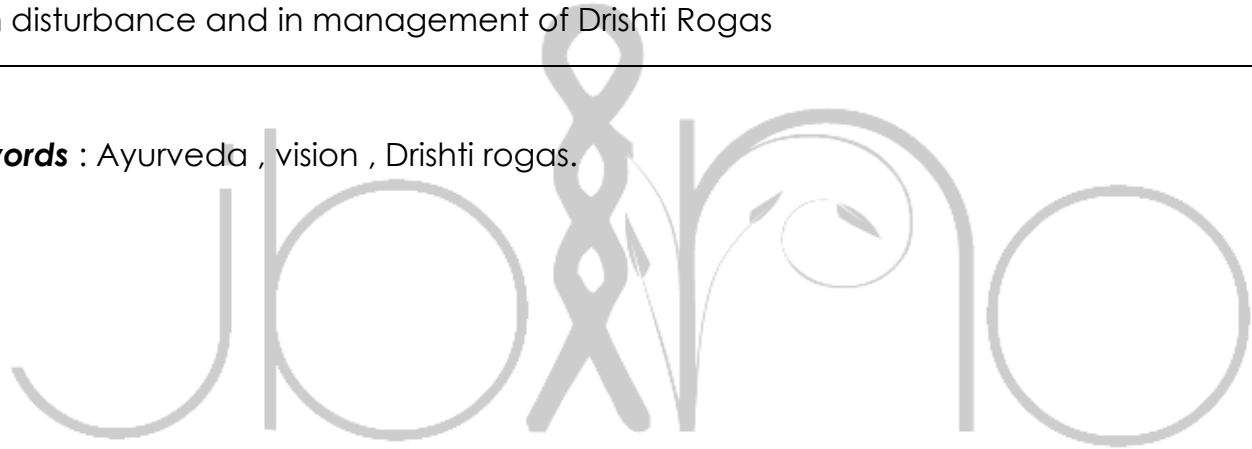
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ABSTRACT

Human body is well equipped to deal with situations but only up to certain levels. After that body ceases to function smoothly and starts giving signals. These symptoms are restlessness, increased irritability, lack of ability to vision and mainly the impulse to run away and hide from situation. In the present article we are studying the role of clinical factors to study the vision disturbance and in management of Drishti Rogas

Keywords : Ayurveda , vision , Drishti rogas.



Introduction

Shalaky Tantra is a specialized branch among Astanga-Ayurveda, which is dealing with the disease of Urdhwajatru or disease above the clavicle [1]. Maharishi Sushruta has described the gross structure of Netra in detail. Nineteen chapters of Sushruta Samhita Uttaratantra are dealing with Netra Rachana Shareera, Kriya Shareera, disease of Netra, treatment of Netra Roga and Kriya Kalpa (Topical treatment) of Netra Roga. This represents the importance of Netra in ancient life science. Netra is the Gyanendriya responsible for visual perception. The perception process of vision is incomplete in the absence of Atma, Mana, Indriya, and Indriyarth[2]. Drishti is the functional unit of the vision process. In the available literatures, the term Patala & Drishti are not specified. Hence it is a matter of debate. Ayurveda, the ancient life science is full of terminologies. To learn and to treat any disease one should have thorough knowledge regarding those terminologies and their multiple meanings used in texts. A very little description of Patala & Drishti is available in the classical literature regarding its measurement, shape, size and Panchabhoutikwa, which are not sufficient to confine Patala & Drishti to any one part of eyeball. By referring the available literature, we have tried to correlate the term Patala & Drishti to tunic/layers of eyeball, refractive media, refractive pathway, retina, fovea and optic nerve of the eyeball. Description Drishti is derived from "Drish" "Dhatu and "Ktin" Pratyaya. It literary means "to see

things" or it is the vision process. If the Dosha seats on the Prathama Patala of Drishti (Yasya Drustau Byabasthita), there will be Avyakta Darshana [3]. It means in Prathama Patala Gata Timira the Dosha has to seat over the Prathama Patala "of Drishti". So, Netra as a whole is Drishti. Drop wise administration of medicines to the open eye, from the height of two Angula, is known as the Aschyatono[4]. This is a Netra-Kriyakalpa explained in different literature of Ayurveda. The Aschyatono process is even more specified by Sarangadhara Samhita. According to him, the administration of medicine drops on the Drung-Madhye, [5, 6] is Aschyatono. The meaning of 'Drung-Madhye' is over the central cornea or above the pupillary aperture on the cornea or above the lens on the cornea. This suggests Drishti is Cornea, Pupillary aperture or the lens. Vivara means a hole or an aperture. Drishti is surrounded by Patala[3] and it is looking like Vivarakriti from outside. In front of Drishti, an aperture is likely to appear [3]. Before the lens, the pupillary aperture is present and before the retina, the pupillary aperture along with the lens is present. Therefore, Drishti may be the anterior segment, posterior segment, pupillary aperture, lens and retina. Drishti-Mandala is constricted and dilated in Sun and in shadow respectively [7]. By this quotation, Drishti can be taken as the pupillary aperture or lens as its diameter and thickness varies with the intensity of light. Therefore, the Drishti is pupillary aperture or lens. Shape and size of the Drishti is like a Masooradala, it means a lentil like[3]. The lentil is biconvex. It reveals Drishti as

biconvex lens. It is described that Netra has six Patala out of which two Vartma Patala and four Akshi Patala [1] . The Timira Roga seats in those four Patala and Timira is the disease of Drishti Mandala.

told that Drishti and Patala have some similarities. We have tried to analyze Patala as follows. • Prathama Patala is Teja Jala Ashrita[1]. Cornea is avascular, so it gets nutrition from the aqueous and the tear film protects the cornea and lubricates it. Aqueous contains 99.9% water (Jala) [8] . The stromal layer of cornea bears 90% of total cornea, which is in a state of dehydration, maintaining the transparency of the cornea[9] . Dehydration cannot possible without the Agni-Mahabhoota. Agni means Teja. If Dosha seats in Prathama Patala then there will be Avyakta Darshana, which can be refractive error. Any pathology in Cornea also causes refractive error. Hence, the cornea can be the Prathama Patala and any abnormality of this structure may lead to refractive error that is Timira, the disease of Drishti. Therefore, the Prathama Patala is Cornea. • Dwitiya Patala is Mamsashrita¹ . Lens is suspended by the suspensory ligaments from the ciliary body. Cilliary body has ciliary muscle[10] . The iris has pupillae muscle[10] , which is the continuation of ciliary body and choroid. Abnormality in the ciliary muscle and Zonules or Suspensory ligament leads to abnormality of accommodation and causes refractive error[11] . The pathology of lens also causes refractive error that is Timira, the disease of Drishti. Six extraocular muscles (EOM) are attached to each eye.

Those EOM are responsible for the eye movement and are inserted into the scleral surface [12] . Strabismus is a disease caused by the faulty insertion and weakness of EOM [13] . The strabismus also causes blurring of vision[13] and strabismic amblyopia[14] . Staphyloma can cause variation in axial length of eyeball; results in the refractive error[15] . Those can be correlated to the Avyakta Darshana and Vramita Darshana, which are the symptoms of Timira. Hence, the uveal tract along with lens can be the Dwitiya Patala. The sclera also can be correlated to Dwitiya Patala as it is Mamsashrita (EOM) and disease of sclera (Staphyloma) can cause refractive error or Timira. • Tritiya Patala is Medashrita[1]. The posterior part of sclera is protected or surrounded by the adipose tissue and the orbital fats, which are nothing but the Meda. Staphyloma, the disease of sclera can cause refractive error and even loss of vision. Therefore, the posterior sclera can be the Tritiya Patala. • Chaturtha Patala is Asthi-Ashrita[1] . Optic nerve is the continuation of retina and optic nerve lodges inside the bony orbit. If Dosha involved in Chaturtha Patala then there will be partial or complete loss of vision[16] . Lesion on the retina or optic nerve may lead to partial or complete loss of vision. So, the Chaturtha Patala and Drishti are retina and optic nerve. This can be summarized as- • Prathama Patala – Cornea, aqueous humour. • Dwitiya Patala - Lens with uveal tract. • Tritiya Patala – The posterior sclera. • Chaturtha Patala –The retina with optic nerve. The Patala as a whole can be considered as the layers of Cornea. In the disease Savrana Sukla of

Krishnagata roga, it has been told that "If the injury occurs to the Dwitiya and Tritiya Patala, it will be Yasya and asadhya respectively" [23] as Krishna mandala is the Cornea while considering the disease explained in the classical texts of Ayurved. In the complication of Savrana Sukla, the Mudga -Akruiti Pidaka (Descemetocoele) has been mentioned, when there is involvement of two Patala [24] . In addition, in the commentary of Dalhanacharya of Avrana Sukla, it has been told that "If the Avrana Sukla involves the Dwitiya Patala, the disease will be Krichhra Sadhya" [24]. Thus, the Patala clearly refers to the corneal layers. As Timira Roga seats on the Patala and Timira is the disease of Drishti, so the uveal tract, the refractive-media and visual pathway can be correlated with Drishti. Netra consists of Five-Mandala. Pakshma, Vartma, Shweta, Krishna and Drishti Mandala respectively[1] . Drishti is the inner most, just behind and adjacent to Krishna Mandala. According to modern ophthalmology, sclera is the outermost and retinal layer is the inner most layer of eyeball. Therefore, Drishti can be retina. If we consider the location of Drishti adjacent to Krishna Mandala then the pupillary aperture and lens In the West, the incidence of cataract in people over 50 years is 15%, while in developing countries it is about 40%.[1] In the developing world, the prevalence is believed to be greater and the onset at earlier ages, making the social and medical costs of blindness from cataract highly disproportional in areas of the world that can ill afford them.[2] Thus, senile cataract is a common and obvious

ocular condition associated with dramatic effects upon vision. The World Health Report published in 1998[3] estimated that there were 19.34 million people who are bilaterally blind from age-related cataract. This represented 43% of all blindness. Minassian and Mehra estimated that for India alone 3.8 million people become blind from cataract each year.[4]

The similarity between Timira and Cataract starts from the word meaning itself. Timira is derived from word Tim which means Kledane that is imbibing of moisture, increase of watery substance in the eye.[5] Timira/cataract denotes a shade of darkness which makes the view of the patients affected by this disease as if looking through water, moisture, waterfall, glazed paper, waxed paper etc.

Till date no accepted medical treatment is available for cataract, surgery is the only available treatment for cataract. Though the prevalence of cataract blindness would decrease due to increase in cataract surgery rate, the absolute number of cataract-blind would increase from 7.75 million in 2001 to 8.25 million in 2020 due to the substantial increase in the population above 50 years in India over this period.[6] Data available in India show that all cataract surgeries are not sight-restoring.[7] Surgical treatment of cataract imposes great economic burden on the society, and the backlog is perhaps too big to be handled by surgery alone at the same time surgical approach have its own complications. If such a factor is identified

which simply delays the onset of cataract by a period of 10 years, the number of cataract surgeries would drastically decrease by 45% or more.[8]

Therefore, the entire world is looking at the other systems of medicine to tackle the situation and looking upon preventive ophthalmology for improving and maintaining vision. In such a scenario, a study on Immature Cataract management gains much importance. Among many anti-cataract medicines Elaneer Kuzhambu Anjana[9] is extensively used clinically since centuries in Kerala by local physicians, however, clinical and experimental data on the efficacy are not available on this formulation. Hence, this formulation was selected for the present study. As senile cataract can be taken as Swabhava Balapravritta Vyadhi which occurs as an aging change in the body. According to Ayurveda, a Rasayana drug which contains rejuvenating properties is the best drugs to avoid senile changes, so Triphaladi Ghana Vati was selected for this trial. This drug contains 11 Ayurvedic drugs; maximum among them were having Rasayana (rejuvenating) properties.

Therefore, this study was planned with the aim to assess the efficacy of Triphaladi Ghana Vati and Elaneer Kuzhambu Anjana as anti-cataract agents.

Total forty patients, from the outpatient department of Shalakya Tantra Department, Institute of Postgraduate Teaching and Research in Ayurveda Hospital, Jamnagar, Gujarat, were

registered in this Randomised Parallel Group Clinical Trial. A prior written informed consent was taken from each and every patient. Clinical study was started after getting clearance from Institutional Ethics Committee (No. PGT/7/-A/Ethics/2013–2014/1767) and study was also registered under Clinical Trial Registry of India (CTRI/2014/01/004357).

Inclusion criteria

Patients of both sexes who met the diagnostic standards of Timira/immature cataract aged 30–60 years were included in this study. Participants were included on the basis symptoms like blurring of vision, visualization of nonexisting things, difficulty in bright light and dim light or night vision and signs like distant visual acuity, pinhole vision, best corrected visual acuity and cataract grading on slit lamp biomicroscopy according to Lenticular Opacity Classification System II.[10]

Exclusion criteria

Patients who are suffering from congenital cataract, mature and hyper mature cataract, glaucoma, diabetic retinopathy, macular degeneration, retinitis pigmentosa, whose random blood sugar level and blood pressure are not within normal limits, who are under steroid treatment and or any kind of immunosuppressive therapy or under any cataract-inducing medication are excluded.

The pigmentary retinal atrophy causes retinitis pigmentosa with the symptom of night blindness[18] and night blindness is also a symptom of Kaphavidagdha Drishti7 . Therefore, the Drishti can be the retina as the Kaphavidagdha Drishti, a disease of Drishti. • Harswajadya is a disease of Drishti having symptoms as day-blindness and perceiving object as smaller than the actual size (Micropsia) 7 . Micropsia can be caused by separation of visual cells[19] . The day blindness and visual cells separation are the diseases of retina. Therefore, Harswajadya can be correlated as the disease of retina. • Nakulandhya (Disease of Drishti) is the Night blindness[7, 20] which is also a symptom of Retinitis pigmentosa (disease of retina) [18] . Therefore, the Drishti is retina. • In the contraindication for Shashtrakarma in Sleishmika Linganasha, it has been told that Drishti must be examined before performing the Shashtra Karma[21] . In modern, the preoperative examination of cataract surgery includes the examination of refractive media (cornea, aqueous, iris, lens and vitreous), retina, macula and optic disc. In this preoperative examination, it is mandatory to examine the transparency of the media, type, stages and color of cataract lens, examination of fundus, its color, swelling and other pathologies of fundus, disc-cup ratio and its color etc. So here the Drishti can be lens, retina • Shadvida Linganasha Lakshana suggests the color of Drishti because of vitiated Dosha. Those are Aruna/brownish, Nila/bluish, Seeta/whitish/ ShankhaVarna/moon-white, RaktaVarna/reddish/Pravala Varna, Vichitra

Rupa/different color due to vitiation of Vata, Pitta, Kapha, Rakta and Tridosha respectively[7]. This can be compared with the color of lens-nucleus in different stages of nuclear cataract. Therefore, the Drishti can be correlated with lens. • Examination of Drishti is indicated prior to the Shashtrakarma of Sleishmika Linganasha. The half-moon like spot, water droplet like spot, Pearly white spot, stable, irregular, thin, different lines and red or brown spots on Drishti with painful condition must be excluded for Shashtrakarma of Sleishmika Linganasha [21] . Those colors of the Sleishmika Linganasha are similar to the color of lens in immature, mature and hypermature cataract. This clearly reveals that the Drishti is nothing but the lens. • Sleishmika Linganasha is Shashtra Sadhya. In this process, a Shalaka is inserted to the eyeball by puncturing it at the temporal aspect of sclera and Lekhana Karma (scarping) is done over Drishti Mandala[22] . This refers Drishti as the Lens. Summary Drishti is cornea according to the administration of Aschyatono and symptom of Prathama Patalagata Timira. Drishti is the pupillary aperture according to the variation in diameter in responds to intensity of light and Dwitiya-Patalagata Timira. Drishti is the lens according to the Shadvida Roopa and Shashtrakarma of Sleishmika linganasha, variation in thickness with the intensity of light, Ashrita of Mamsa Dhatu and shape like the biconvex lentil. Drishti is retina and optic nerve according to disease of Drishti and fovea according to the disease of Drishti, the size of Drishti as compared to the size of Krishna Mandala and firefly like appearance. While

correlating the Patala with the structures of eyeball the cornea and aqueous can be compared with Prathama Patala, the lens along with the uveal tract can be considered as Dwitiya Patala, the posterior sclera will be the Tritiya Patala and the retina with optic nerve can be compared with the Chaturtha Patala. While considering the disease of Krishna mandala, the layers of cornea can be referred as the Patala

REFERENCES

1. Sashtri Ambika Dutta, Sushruta Samhita with Ayurveda-tattva-sandipika Hindi commentary published by Chaukhamba Sanskrit Sansthan; Varanasi; Reprint 2010, Uttara Tantra 1/10-18, P.6.
2. Tripathy Brahmananda, Charaka-Samhita with Charaka-Chandrika Hindi commentary published by Chaukhamba Surbharati Prakashan; Varanasi; Reprint 2008, Sutra Sthan 11/20, P.231.
3. Sashtri Ambika Dutta, Sushruta Samhita with Ayurveda-tattva-sandipika Hindi commentary published by Chaukhamba Sanskrit Sansthan; Varanasi; Reprint 2010, Uttara Tantra 7/3-6, P.40.
4. Tripathy Brahmananda, Astanga Hridayam with Nirjala Hindi commentary, Chaukhamba Sanskrit Pratishthan; Delhi; Reprint 2017, Sutrasthana 23/2-4, P.263.
5. Sashtri Parsurama, Sarangadhara Samhita with Adhamalla's Dipika and Kasirama's Gudhartha-Dipika commentary, Nirnaya Sagar Press second edition, Uttara Khanda 13/13.
6. Sashtri Laxmipatti, Yogaratnakara with Vidyotini Hindi commentary, Chaukhamba Sanskrit Sansthan, Varanasi seventh Edition 2002, Uttarardha netra Roga chikitsa Aschyatono Vidhi P. 385.
7. Sashtri Ambika Dutta, Sushruta Samhita with Ayurveda-tattva-sandipika Hindi commentary published by Chaukhamba Sanskrit Sansthan; Varanasi; Reprint 2010, Uttara Tantra 7/27-40 P. 44.
8. Khurana A k, Comprehensive Ophthalmology, Fourth edition, 2007, Jaypee. New Delhi P. 207.
9. Khurana A k, Comprehensive Ophthalmology, Fourth edition, 2007, Jaypee. New Delhi P. 90.
10. Khurana A k, Comprehensive Ophthalmology, Fourth edition, 2007, Jaypee. New Delhi P. 135.
11. Khurana A k, Comprehensive Ophthalmology, Fourth edition, 2007, Jaypee. New Delhi P 41
12. Khurana A k, Comprehensive Ophthalmology, Fourth edition, 2007, Jaypee. New Delhi P. 314.
13. Khurana A k, Comprehensive Ophthalmology, Fourth edition, 2007, Jaypee. New Delhi P. 321-322.
14. Khurana A k, Comprehensive Ophthalmology, Fourth edition, 2007, Jaypee. New Delhi P. 319.
15. Khurana A k, Comprehensive Ophthalmology, Fourth edition, 2007, Jaypee. New Delhi P. 29, 32.

16. Sashtri Ambika Dutta, Sushruta Samhita with Ayurveda-Tattva-Sandipika Hindi commentary published by Chaukhambha

Sanskrit Sansthan; Varanasi; Reprint 2010, Uttara Tantra 7/16-18, P.42.

