



Scientific Rationale Of Pathogenesis Of Eye Diseases From Ayurvedic Perspective

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Abstract –Dristi means vision .vision possible through the eyes , the windows to this beautiful world . Ophthalmology has been now became so advance in technology that helps the doctors in good diagnosis and hence treatment .In ayurveda our ancient scientists had also so keen observation and experience that we can solely rely on their principles and and carry on forward to uplift the present science . Regarding drishtigata roga , in ayurveda there has been controversy in its terminologies and hence confusion regarding anatomy,etiology and pathogenesis of all ocular diseases mentioned in Ayurveda so here we are going through possible mechanics of *drishtigata* rogas that helps us in better understanding of the disease.basicaly the major etiology is *nidan* sevan ,indulgence in causative factors regarding particular diseases and hence creating the vicious cycle of disease pathology on going through its anatomical structures and each unit of that participate in its pathology .All this go through body channels and depending on cause may manifest s local or a part of eye disease or involving whole structure of eye .

key words –drishti , nidan , samprapti , susruta , ayurveda ,

Introduction –eyes are the soul of the mind as they are windows of this beautiful world .these are situated in the foremost important organ,the brain. –pranaayatam or marma of our body as described in ayurveda .Even they innumarated it as the most important among all indriyas[1].Ayurveda promises to cure the diseases if treated earlier at the stage of pathology of any type of visual failure .the scientific approach toward cure of diseases helps in better cure of diseases too. before going into details of the pathology of disease we have foremost go through the variety of causative factors that have been widely described in our texts for all diseases.

Ayurveda claims extreme importance to the aetiological aspects because ayurveda propose “avoiding nidana” is treatment.[2] According to acharya vagbhata all general nidanas mentioned for the vitiation of dosas are equally important along with achakshushya (badly affect eyes) and ahita (not good eyes) aharas & viharas in the manifestation of eye diseases. susruta explains vast variety of specific nidanas for the aetiopathogenesis of eye diseases.

Among this, reasons which cause vitiation of kapha is significant considering the aetiopathogenesis of kapha timira, kapha kacha and kaphaja linganasa. as cataract is one of the major eye disease we are

focusing more on this on the excessive intake of sweet, sour, salt, abhishhandhi (eg: curd, fish etc) vidahi, type of aharas ageerna (indigestion), sleeping in day time and all items which cause brumhana provoke kapha according to acharya.[3] though the role of these nidanas is not scientifically proved or statistically assessed, a keen observation of the patients reveal that these are linked to pathology . A lot of aetiological factors supporting the early development of cataract in these area include lack of sirobhyanga daily,where abhyanga according to acharya is beneficial in maintaining healthy eye,longevity,sound sleep, healthy skin and also makes the body strong the lack of abhyanga fails to maintain the doshas in a balanced state there is possibility of vitiation of all doshas especially related to urdha jatru. application of mustard oil over head makes no difference, it is harmful to the eyes because of its ushna, theekshna property and is achakshushya, and they mainly use this oil for cooking. daily intake of dahi (curd), lassie which is restricted by acharya for daily use. excessive intake of sweets & milk products, extreme climates are some factors on ayurvedic point of view results in vitiation of kapha dosha and early development of cataract,a major drishtigata roga nowadays .

According to the concepts of ayurveda the vitiated doshas through siras reach the eye, and localize in the varthma (lid) sita-asita mandala (white & black of the eye), sarvakshi or drishti and manifest different diseases. the differentiation of site of lesion surely depends on the local (pradesika) damage or dhatudushti.[4]

Drishti involves all most all structures of eye like cornea ,lens, vitreous, retina etc which enhance normal visual function as per the definition given by acharya or drishti is said to have different units, and these units respond similarly to the vitiated doshas for e.g. when vata vitiates and localizes in drishti it creates vata timira lakshanas like bended appearance along with diminished vision ,the bended nature of object or irregular metamorphosis is due to the irregular curvature caused by the vikruta vata, e.g. astigmatism ,the same symptoms can produce in the lens when vikrutavata distort the curvature of lens termed lenticonus (a very rare condition).now it is possible to measure the curvature, and we can visualise the inner structures of the eye..and can confirm doshas manifesting the pathology, what i am trying to convey is the concepts with the help of technology becomes more transparent and materialised .suppose pitta vitiates and localised in different units of drishti how they will respond, as most of the structures are transparent and devoid of direct blood supply we can't expect the whole inflammatory signs here when pitta gets deranged at the level of drishti, acharya says pitta kopa causes various kinds of photopsias (sensation of light in the visual field) haloes (spreading of light) along with diminished vision. now it's very clear that corneal oedema, swelling of the lens in the initial stage of cataract and retinal oedema mimic pittatimira lakshana[5].So the units of drishti respond similarly for same doshas. because of the uniqueness in the symptoms produced in response to vitiated doshas and considering importance of these structures in maintaining the normal visual function these structures are grouped under a common title -the drishti. this view is sufficient enough to explain the

whole pathologies related to visual failure in terms of ayurveda and without the direct translation like drishti patala vicheda for retinal detachment.

It is not compulsory that a particular timira should follow the same pattern in its due course. During the pathological process depending on the intensity of nidana there is chance of involvement of other doshas .rakta timira if the provocation of the raktha is not strong enough to continue the samprapti it will never leads to raktha kacha or linganasa[6]. When we analyse the symptoms rakta timira, it is evident that there is leakage of blood in the optical system of the eye and the site may be anywhere in the drishti (provided with blood supply, or in close relation to vascular structures) because of dhatu kshaya in raktha timira vata will provoke and there is chance of manifestation of vata timira lakshana in the following course of the disease ,when the vitiation of rakta is not sufficient enough to proceed the pathology(either in response to treatment or due to weak nidana etc). e.g. a mild intravitreal haemorrhage resolves causing floaters (movable black spots) in the visual field (one among the vata timira lakshanas). it is the vyadhighataka that determine the course of disease process. there is belief that the timira will follow the same criteria till the end, and being kaphaja linganasa there is no role of other doshas in the aetiopathogenesis of cataract. acharya himself explain the participation of other doshas in the samprapti of k.linganasa, according to him it looks white in the absence of other doshas, and staining of drishti with colours other than white can be viewed as a proof of participation of other doshas in the samprapti of k.linganasa.

The term 'patala' is the main obstacle in proper understanding of the pathogenesis of drishtigaroga.in stead of its general concepts patalas in the drishti are sites where vitiated doshas localise and develop various visual abnormalities and finally total loss of vision. in order to explain the progressive loss of vision in timira a drishtigata roga it is better to consider the above said units of drishti comprise these 4 patalas in it, as they can independently develop these the stages like timira, kacha and linganana.and acharya relates these patalas with different dhatus. so there is no doubt the patalas in connection with the samprapti of drishtigata roga are dhatus in the configuration of particular unit.

Every structure in body represents all dhatus or made of dhatus, likewise the units of drishti represent all dhatus in its finest form as drishti itself is made of saramsa of panchamahabhoota. the enhancement of superficial dhatus (rasa, rakta) of drishti in the pathogenesis results in timira and progressive involvement of the deeper dhatus leads to kacha the intermediate state and finally to linganasa[7] resulting total damage of the involved structure so that vision can't be retained by any means except kaphaja linganasa where ambulatory vision can be retained by dislocating the damaged unit of drishti from the visual axis through surgery.

Another major eye disease that is threatening for the sight is diabetic retinopathy that can be taken among dristigatat roga. Regarding its etiology as per texts is amla rasa sevan, sukta aranala, masha, vegadharana ,swapnaviparyaya, are achakshyshya factors in prameha which leads to the samprapti of this disease.timira is

important disease among drishtigata roga which means darkness(kleda) eye[8].tejo *guna* dominated by *Pitta dosha* in *netra* will always have fear from *kaphadosha*. The combination of *kleda* and *kapha* in *Prameha*, through *pratilomagati*

of *vyana vayu* and *rasavahinis* reaches *netra* and stimulate the process of *srotorodha* in *sukshma raktavahisrotases* which can be correlated to microvascular occlusion due to loss of pericytes and thickening of basement membrane causes occlusion (Capillaropathy).Deformation of erythrocytes and rouleaux formation, increased platelets stickiness and aggregation of platelets (Haematological changes) causes endothelial cell damage[9].

Subsequently due to *srotorodha* their causes *atipravritti* of *utkleshitadoshas* which can be neovascularisations caused by vasoformative substances(growth factors) elaborated by hypoxic retinal tissue in an attempt to revascularise hypoxic retina. Further causing *siragranthi* can be justified to formation of aneurysms where there will be localised saccular outpouchings due to physical weakening of the retinal vessels.The *utkleshana* of *doshas* in *srotas* due to *srotorodha* deranges the vasculature and permeability of retinal vessels causing *srotoabhisyanda* and giving rise to hard exudates.Due to increased *kapha* and *kleda* in *Prameha* it increases *sara guna* and *drava guna* of *pitta* and *rakta* in *srotas* and also the *abhisyandi srotas* causes leakage of the blood vessels causing dot and blot haemorrhages, which simulates *raktapitta samprapti*.

The *srotorodha* in *siras* resulting in *agnimandya* at the level of *dhatwagni* and *bhutagni* causes lack of circulation of *pitta* and *rakta* in those areas where there will be *shanika pandu lakshana*, which represents as cotton wool spots of ischaemic areas of retinal nerve fibre layer.[10][11]

Thus by focusing on the *samprapti* of the disease we can be able to do justice to the treatment and proper control of the diseases concerned .

Conclusion :-

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 through better understanding of the disease process, and hence treatment . Ayurveda is a preventative therapy that goes to the root of the problem. It is a gradual process that balances the body on many levels and can take time, so remember to have patience with the process. Whereas conventional medicine is primarily oriented toward the treatment of disease, Ayurveda is oriented toward prevention, health maintenance, and treatment. In conventional medicine, drugs are developed based on the concept that the elimination of specific causes of a disease, such as microorganisms, will cure a disease. On the otherhand, the belief in Ayurvedic medicine is that a disease is the product of an imbalance in the body and mental elements that reduce the body's resistance to diseases. If the imbalance is corrected and the body's defense mechanisms are strengthened by herbal formulas, lifestyle changes, and diet, then the body will resist a disease with a goal of eliminating it. Herbal and herbomineral products

regularly used in Ayurveda are believed to strengthen the body's defenses. Scientific evidence is gradually developing in support of the Ayurvedic concept.

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