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REVIEW ARTICLE ON ROLE OF JALAUKAVACHARANA AS ADJUVANT THERAPY IN MANAGEMENT OF ANTERIOR UVEITIS

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ABSTRACT

Anterior uveitis is inflammation involving the anterior uveal tract, the Iris and anterior part of the ciliary body. Symptoms in acute anterior uveitis consist of the rapid onset of unilateral ocular pain, photophobia, redness of eye, watery discharge, keratic precipitates, aqueous flare and cells. In Ayurveda symptoms of Anterior Uveitis can be correlated with *Pittaj* and *Raktaj Adhimantha.* Anterior uveitis is cured modern medicine but there is a chances of recurrence of disease. However in Ayurvedic texts use of leech therapy is mentioned beneficial in the many eye disorders also mentioned that the disease treated with 'Raktamokshana' has less chances of reoccurrence. Therefore, in this review article an attempt is made to asses Anterior uveitis and discuss about role of *Jalaukavacharana* in preventing Anterior uveitis.

KEYWORDS: Anterior Uveitis, *Pittaj Adhimantha, Raktaj Adhimantha, Jalaukavacharana.*

INTRODUCTION

Eye is one of the organ with high importance because the person without eyes, can't able to differentiate light and darkness. The whole word will be dark and life will be meaningless. Therefore all the sincere effort should be taken to protect his eyes throughout period of life.[1]

The term Uveitis means the inflammation of the uvea i.e the middle layer of the eyeball that include iris, ciliary body and choroid. The Inflammation of the uveal tissue from iris upto pars plicata of ciliary body is known as anterior Uveitis. It may be subdivided into three types Irities, Iridocyclitis and cyclitis.[2]

Many cases of Uveitis are chronic and can lead to many potential complications including cataract, increasing intraocular pressure, glaucoma, retinal detachment, corneal haziness. These complications can lead to permanent visual impairment.[3] In current era the modern science has made tremendous success and advances in diagnosis and management strategy of anterior Uveitis. According to modern science, the treatment protocol of anterior uveitis include Non-steroid anti-inflammatory drugs, Antibiotic eye drops and corticosteroids, preventing the posterior synechia with long acting cycloplegic agent.

On reviewing the clinical presentation from classical ayurvedic texts, the symptoms of anterior uveitis very similar to clinical picture of Pittaj and Raktaj Adhimantha.[4]

In Ayurveda various treatments had been mentioned for Adhimantha including Raktamokshana. Jalaukavacharana has the property to subside immediately the pain, swelling, burning sensation and redness.

AIM AND OBJECTIVES

To reveal the role of Jalaukavacharana in anterior Uveitis

To explore textually the aetiopathogenesis of anterior uveitis according to Ayurvedic concept as well as modern point of view.

DISEASE REVIEW

Anterior Uveitis

It is most common form of Uveitis. Iritis refers to inflammation primarily involving the iris and Iridocyclitis to involvement of both the Iris and anterior ciliary body. Acute anterior uveitis is commonest presentation of HLA-B-27 related and idiopathic forms make up the largest proportion.[5]

Pathogenesis of Uveitis

Etiology in these cases is uncertain, but may involve cross reactivity with particular microbial antigens in genetically predisposed individual.

- **Infective exogenous infections** due to the introduction of organisms into the eye through a perforating wound or ulcer.
- **Secondary infections-** Spread of infection through the corneal, scleral or retinal tissue.

- **Endogenous infections-** Organisms primarily lodged in some other organ of body, reach the eye through the blood stream. These includes bacteria infections such as tuberculosis, syphilis, gonorrhoea, brucellosis, viral infections such as mumps, smallpox or influenza in which an Iridocyclitis occurs.

- **Immune related inflammation**

Uveitis may represent hypersensitivity to autologous tissue components. It is found in association with Still disease in children, systemic lupus erythematosus, Wegener granulomatosis, sarcoidosis, ankylosing spondylitis, Reiter disease, relapsing polychondrytis, Behcet syndrome and rheumatoid arthritis, all of which have an autoimmune component in their etiology.

A number of diseases associated with uveitis occur much more frequently in person with certain specific HLA antigens. Thus, in patients with ankylosing spondylitis 90% belong to the HLA-B27 antigenic group in contrast to approximately 8% of the normal population. Patients suffering from juvenile chronic arthritis with acute anterior uveitis are usually negative for the rheumatoid factor and for antinuclear antibodies but belong to the HLA-B27 antigenic group. On other hand, patients with Juvenile chronic Arthritis and chronic uveitis, although negative for the rheumatoid factor, have a high incidence of HLA-B27 antigens. Other diseases associated with specific HLA antigens are Vogt-Koyanagi-Harada disease and Behcet syndrome.

- **Neoplastic**

Some intraocular malignant tumours such as retinoblastoma, iris melanoma and reticulum cell sarcoma and systemic haematological malignancies such as leukemia, Lymphoma and histiocytic cell sarcoma can present with features of uveitis and are termed ‘masquerade’ syndromes.

- **Traumatic**

Blunt or penetrating ocular trauma can produce features of Iridocyclitis. Surgical trauma from intraocular procedures such as cataract extraction, trabeculectomy, vitreoretinal surgery etc can produce postoperative uveitis.[6]

Clinical Features[7]

- **Visual acuity-** It is variably impaired depending on the severity of inflammation and the presence of complications. It is frequently only mildly reduced in Acute anterior uveitis.
- **Ciliary Congestion-** It is circumcorneal conjunctival hyperaemia with a violaceous hue due to involvement of deeper blood vessels, and it is typically seen in anterior uveitis of acute onset.
- **Miosis-** It is due to pupillary sphincter spasm predisposes to the formation of posterior synechiae.
- **Anterior chamber cells-** These are a dependable indicator of inflammatory activity. Grading performed by estimating the number of cells in 1mm by 1mm slit beam field, employing adequate light intensity and magnification. Inflammatory cells are commonly also seen in the anterior vitreous.
- **Hypopyon-** It refers to whitish purulent exudate composed of myriad inflammatory cells in the inferior part of the anterior chamber, forming a horizontal level under the influence of gravity. Hypopyon is commonly seen in HLA-B27 related acute anterior uveitis.
- **Ketaric precipitates-** These are deposits on the corneal endothelium composed of inflammatory cells such as lymphocytes, plasma cells and macrophages.
- **Aqueous flare-** It is haziness of normally clear fluid in the anterior chamber, reflecting the presence of protein due to breakdown of blood-aqueous barrier.
- **Fibrinous exudates-** It is seen in anterior chamber, it is common in severe acute anterior uveitis, and as with hypopyon is often seen with HLA-B27 related inflammation.
- **Iris nodules-** Koeppe nodules are located on the pupillary margin, and may be the site of posterior synechiae formation. They can occur in both granulomatous and non-granulomatous anterior uveitis. Busacca nodules involve the iris stroma and are a feature of granulomatous uveitis. Yellowish nodules can develop from dilated iris vessels(roseolae) in syphilitic uveitis. Iris ‘pearls’ may be seen in Lepromatous chronic anterior uveitis. Iris crystals, thought to consist of immunoglobulin deposits, are a rare finding some cases of chronic uveitis.
- **Posterior synechiae-** It is inflammatory adhesions between the pupil margin and the anterior lens capsule, and may be particularly likely to form at the location of a Koeppe nodule. Once established, every attempt must be made to break posterior synechiae before they become permanent.

AYURVEDIC REVIEW

Pittaj Adhimantha

The features of *Pittaj Adhimantha* are:

Rakta Raji Chitam: Full of red streaks in the eye (congested blood vessels)

Sravi: Discharge

Vahnineva Avadahana: Feel as if burnt by fire.

Dahi- ksharenaktam-iva-ksatam: Burning sensation like wound treated with caustics.[8]

Raktaj Adhimantha

The features of *Raktaj Adhimantha* induce more aggravated form of *Pittaj Adhimantha*, symptoms are*:*

Bandhu-jiva-pratikasham: Eye looks red like *Bandhu-jiva* flower.

Tamyati: Eye feels tense or visualizes darkness or blackish appearance of objects or reduced vision.

Sparashna-akshamam: Tenderness

Raktasrava: Bleeding

Nistoda: Pricking sensation

Pashyati agni-nibha-disha: Visualizes flames in all directions.

Krishna bhaga Arishtavat -ch-Raktam-Agni: The cornea appears like a soapnut dipped in blood or glowing like fire. (Ciliary Congestion)

Yat deeptam Rakta paryantam: Burning sensation.[9]

Management of Anterior Uveitis

According to *Charak Samhita,* most of disease can be managed with *Shodhana* (Bio-purification method), Sanshamanam (Pacification, palliative treatment) and Nidan parivarjanam.[10] Anterior Uveitis can be managed by *Shodhana*, *Shamana*, *Nidan parivarjanam* by removing the causative factor and breaking pathogenesis. *Sanshodhana* may be in the mode of *Jalaukavacharana* out of many *Shodhan karma.*[11]

According to *Sushruta*, the vitiated *dosha* by *hetusevana* will course through the *Sira* and reach *urdhvabhaga* to produce diseases in different part of the eye.[12] In the pathogenesis of Uveitis, there is *pittadushti*, vitiated *pitta dosha* vitiates *Rakta dhatu.* These vitiate *Rakta* and *Pitta* goes in uveal tissue by *sira* and develops Uveitis. *Netra* is the site of *Alochaka pitta.*[13] The properties of *pitta* and *Rakta* are similar because they have *Ashrayashrayi bhav*.[14] In

such condition, *Jalaukavacharana is useful treatment in Netraroga* produced due to vitiation of *Rakta* and *Pitta*. By this treatment vitiated *rakta* is removed from *Netra.*

Leech saliva contains the following substance

Hirudine, Hyaluronidase, histamine like vasodilators, collagenase, inhibitor of kellikrin and superoxide production and poorly characterized analgesic compounds. The saliva of Leech consists of numerous bioactive constituents that posses anticoagulant, anaesthetic, anti-inflammatory, vasodilator, antibiotic and anti-oxidant properties. These constituents express their action by multiple mechanisms in several different conditions of various diseases.[15]

DISCUSSION

Due to similarity in clinical features, disease Anterior Uveitis can be compared to *Pittaj* and *Raktaj Adhimantha.* According to Ayurveda, the vitiation of *dosha* is the first step of beginning of disease. These vitiated doshas get accumulate in *Strotasa* and resulting in the occurrence of diseases.

In *Chikitsasthana, Sushruta* described the benefits of Raktamokshana that, it is not only purifies the channels but also let the other parts become free from disease and action is faster than other remedies. *Sushruta* has listed procedures like *Shring, Alabu, Ghati Yantra, Pracchana* etc for bloodletting action. Out of these, *Jalaukavacharana* is safest, quick acting nature and less complicating effect. In *Chikitsasthana Acharya Sushruta* described whole topic *Raktamokshana* which explains the site of *Raktamokshana*. *Jalaukavacharana* removes impure blood from the eye and along with that it puts biologically active substance that are useful in the management of several diseases. Regarding the management of *Netrarogas, Raktamokshana* should be considered as supreme method for Anterior Uveitis.

CONCLUSION

The main objective in treatment of anterior uveitis is to reduced the inflammation and restore the structural integrity. The Ayurvedic management helps to bring down the rate of inflammation and also it decreases the rate of reoccurrence. Jalaukavacharana has been described under the heading of 'Raktamokshana', which is one of the panchakarma mentioned in Ayurveda. Leech therapy has a great potential to treat inflammatory, infective disorders. Hence, leech therapy proves to be helpful as adjuvant therapy in anterior uveitis.

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