

## A CRITICAL REVIEW ON ANTERIOR UVEITIS AND IT'S AYURVEDIC APPROACH

Neha Bernwal<sup>1\*</sup> and B. Muhopadhyay<sup>2</sup>

<sup>1</sup>PG Scholar, Department of Shalakya Tantra, IMS, BHU.

<sup>2</sup>Professor, Department of Shalakya Tantra, IMS, BHU.

Article Received on  
01 July 2017,

Revised on 22 July 2017,  
Accepted on 12 August 2017

DOI: 10.20959/wjpr20179-9297

**\*Corresponding Author**

**Dr. Neha Bernwal**

PG Scholar, Department of  
Shalakya Tantra, IMS, BHU.

### ABSTRACT

Anterior uveitis denotes intraocular inflammation that involves the iris (iritis), anterior part of the ciliary body (anterior cyclitis), or both (iridocyclitis). It is the most common form of intraocular inflammation at uveitis centers worldwide. Anterior uveitis is usually the most easily managed form of uveitis. However, in some cases it can lead to sight-threatening and serious complications such as glaucoma, cataract, and cystoid macular edema. Also treatment modalities like steroids and immunomodulatory drugs have their own hazardous effects. Thus, there is a need of collaboration of different systems of medicine

to overcome this overwhelming disease entity. Concept of Anterior Uveitis is not present in Ayurveda as such in modern ophthalmology. But there are certain concepts in *Ayurvedic* ophthalmology, which can explain the “Anterior Uveitis” thoroughly. *Adhimantha* is one of the diseases explained in *Ayurveda*, which can explain the disease “Anterior Uveitis” clearly on the basis of symptoms and signs explained. The present study is to bring forward the concept of Anterior Uveitis in Ayurveda with special reference to *Pittaja* and *Raktaja Adhimantha*.

**KEYWORDS:** Anterior Uveitis, Steroids, Immunomodulatory Drugs, *Ayurveda*, *Adhimantha*.

### INTRODUCTION

Eye is the most highly specialized sense organ, serving the most vital function of providing sight of living creature. Vision is unarguably the most important senses. Anterior uveitis is the most common intraocular inflammatory disease with a varying incidence across the globe. The potential and severe consequences of untreated or recurrent anterior uveitis are

probably underestimated and under-reported. Anterior uveitis which can be categorized as iritis, anterior cyclitis and iridocyclitis, the last one is the most common type of all uveitic entities. Anterior uveitis often causes a painful red eye with mild to moderate vision loss, but its long-term sequelae contribute significantly to the total burden.

Though Modern ophthalmology has made tremendous progress and advances in the diagnosis and treatment strategy of uveitis in the recent times but it's recurrence and complications are the ophthalmic riddle yet to be solved. so there is a need to look on the other systems of medicine for treatment remedies of for uveitis.

The importance of ayurvedic literature about diseases and treatment cannot be ignored. Concept of Uveitis do not exist as such in ayurvedic literature but it seems that some of the diseases along with their clinical features described in ayurvedic classics are simulating and having great resemblance with uveitis.

### **Anterior Uveitis**

Anterior uveitis denotes intraocular inflammation that involves the iris (iritis), anterior part of the ciliary body (anterior cyclitis), or both (iridocyclitis). Primary site of inflammation, as determined clinically, is the anterior chamber and/or anterior vitreous.

The *Standardization of uveitis nomenclature (SUN) working group* has categorized uveitis according to the *onset*, *duration*, and *course* of the disease. Anterior uveitis can be of an *acute* or *insidious* onset. The *duration* of anterior uveitis can be *limited* (less than or equal to three months) or *persistent* (more than three months). Anterior uveitis is also classified based on the *disease course*: It is classified as *acute anterior uveitis* when there is an episode of sudden onset and limited duration; *recurrent anterior uveitis* when repeated episodes occur separated by periods of inactivity for at least three months without treatment; and *chronic anterior uveitis* when it persists and relapses in less than three months after discontinuing treatment. Anterior uveitis may also be classified as *granulomatous* or *non-granulomatous* according to its *clinical appearance*, and *infectious* or *non-infectious* according to its etiology. Anterior uveitis can be associated with various systemic diseases and further systemic physical examination and investigations should be carried out when required. With a systematic approach, including detailed history, ocular examination and ancillary investigations, a diagnosis can be established in up to 70 % of cases.

## Prevalence

Although causes of uveitis differ among the various regions of the world, Anterior uveitis is the most common form of intraocular inflammation at uveitis centers worldwide.

## Symptoms

As anterior uveitis can present with an acute, chronic, or recurrent form, the severity of symptoms ranges from no symptoms in chronic disease to very severe symptoms in acute uveitis. Patients with insidious-onset chronic anterior uveitis do not have symptoms until the development of complications that cause blurred vision. Young children with chronic anterior uveitis are typically asymptomatic. By contrast, patients with acute anterior uveitis associated with the HLA-B27 antigen are severely symptomatic and start feeling a dull ocular pain even before any evidence of an acute attack can be detected on clinical examination. Symptoms of acute anterior uveitis include *pain, photophobia, redness, tearing, blurred vision* and *floaters*.

## Clinical Signs

**Ciliary Injection:** In iritis or iridocyclitis the enlargement of episcleral vessels around the limbus is seen in dark red color. **Keratic Precipitates** -Keratic precipitates (KPs) are inflammatory cellular deposits on the corneal endothelium. The morphology and distribution of KPs help the differential diagnosis of anterior uveitis. The morphology of KPs may change from dust-like particles to large deposits **Anterior Chamber Flare**- Aqueous humor is a transparent liquid in healthy eyes. Breakdown of the blood-aqueous barrier causes protein exudation into the anterior chamber. Increased protein concentration of the aqueous humor causes an optical phenomenon called flare or Tyndall effect. The grading of flare in the anterior chamber helps to assess the severity of anterior uveitis and has importance in monitoring the patients' response to therapy. Flare can be clinically graded on a 0 + to 4 + scale at the slit lamp. **Aqueous Cells**- Anterior chamber cells are primarily lymphocytes in most episodes of anterior uveitis, but a significant number of neutrophils may be present early in the course of disease. The intensity of the cellular reaction in the anterior chamber is graded according to the number of inflammatory cells in the 1 x 3 mm slit-lamp beam. The level 0.5 + corresponds to (1–5) cells, 1 + corresponds to (6–15) cells, 2 + corresponds to (16–25) cells, 3 + corresponds to (26–50) cells and 4 + corresponds to more than 50 cells. **Hypopyon**- When there is an exceedingly high amount of leukocytes in the aqueous, they precipitate with gravity and form an accumulation in the anterior chamber angle that is

referred to as a hypopyon formation. ***Iris and Trabecular Meshwork Nodules***- Iris nodules are accumulations of leukocytes on the anterior iris and they represent granulomatous uveitis. Iris nodules are called Koeppe nodules when they are seen at the pupillary margin and Busacca nodules when they occur on the iris stroma. ***Pupil Changes***- In acute iritis and iridocyclitis, miosis occurs. ***Diffuse iris atrophy***- may be present. ***Anterior and Posterior Synechiae***- Adhesions between the anterior lens surface and the iris are named as posterior synechiae and adhesions in iridocorneal angle are named as anterior synechiae. Posterior synechiae extending for 360 degrees are called *seclusio pupillae* and lead to pupillary block glaucoma. Anterior synechiae can cause angle closure glaucoma. In general, the presence of synechiae shows that inflammation is recurrent or chronic. ***Changes in lens*** - Inflammatory cells and pigment deposits can cause a fibrinoid membrane on the lens surface. Complicated cataract may be seen as a result of thickened lens capsule, altered membrane permeability, and the use of topical corticosteroids. ***Changes in IOP***- Intraocular inflammation may lead to raised intraocular pressure (IOP). On the other hand, acute anterior uveitis episodes can result in reduction of IOP. Severe inflammation of ciliary body may lead to decreased aqueous production and increased uveoscleral outflow. Consequently, transient hypotony can be seen in exacerbations of anterior uveitis such as HLA-B27 related acute anterior uveitis. Persistent hypotony, on the other hand, may result from ciliary body atrophy and/or ciliary detachment caused by a cyclitic membrane formation. Persistent hypotony is considered as the most severe complication of chronic anterior uveitis.

### Treatment

Cycloplegics for relaxation of ciliary muscles and prevention of synechiae formation, Corticosteroids for controlling the inflammation in acute phase in topical, periocular, intraocular and systemic dosage form according to severity of disease. Systemic immunosuppressives and immunomodulatory drugs are used in patients who don't respond to steroids. Specific treatments are required for specific causes.

In conclusion, anterior uveitis can have a benign clinical presentation but can cause serious complications like secondary glaucoma, complicated cataract and atrophic bulbi if not diagnosed and treated on time.

The features can be correlated with the *Pittaja* and *Raktaja Adhimantha* of *Sarvagata Vyadhies*. Symptoms of acute anterior uveitis include *pain, photophobia, redness, tearing, blurred vision* and *floaters*, which are described in *Pittaja* and *Raktaja Adhimantha*.

Symptoms of *pittaja adhimantha* due to Vitiated *pitta dosha* includes burning sensations (*Vahninev avdahyate* and *Ksharenksatamam eva*), congestion (*Raktarajichitam*), discharge (*Sasvedam*), inflammation visual haloes (*pitta darshana*) headache and unconsciousness (*Moorcha-shiro-Daah yutam*). While *raktaja adhimantha* includes more aggravated form of *pittaja adhimantha*. Symptoms are severe congestion (*Bandhujeeva pratikasham*), Pain on touch (*Sparsh-akshamam*), haemorrhage (*Rakta srava*), pricking pains (*nistoda*), visual halos (*Pashyati Agninibhadish*) and ciliary congestion (*Raktanimagnaarishta vat krishnabhaga*), burning sensation (*Yat deeptam Rakta paryantam*).

### Treatment In Ayurveda

1. Removal of causative factors (*Nidana parivarjana*) in *Poorvarupa awastha* as well as *Samshodhan chikitsa* {*Antah-parimarjana* (Systemic use of drugs as *Virechana*, *Sirovirechana*, *Vasti*, *Siramokshana* etc) and *Bahir-parimarjana* (Ocular therapeutics as *Kriya kalpas*)} and *Sanshaman chikitsa* (like *Pitta shamaka* and *Rakta shodhaka aushadha* and Dietary regimens).
2. *Virechana* and *Rakta Visravana* are the *Sarvadehika* procedures are described in *Pittaja adhimantha* chikitsa. *Seka*, *Alepa*, *Nasya*, *Anjana* are the local procedures described in form of local treatments. Beyond this all other *pitta-shamaka* chikitsa should be done. Several drugs like *Musta*, *palasha*, *Doorva*, *Daruharidra*, *Amalaki*, *Draksha* etc are also described in various drug dosage form either to use locally or systemically. All these procedures and drugs described in classics are known for *Pitta shaman*.
3. In *Raktaja adhimantha* chikitsa, after *samshodhan* by *Kaumbha Ghrita* and *Mamsa rasa*, *siramokshana* is indicated. Also *Virechana* and *Shirovirechana* are indicated as *Sarvadehika* procedures. *Pradeha*, *parisheka*, *nasya*, *dhoomapan*, *anjana*, *tarpana* etc are described in local therapeutics. Also description of *Jalauka avacharna* is present.

### CONCLUSION

Anterior uveitis is intraocular inflammation which involves iris and anterior part of uvea. Anterior uveitis can have a benign clinical presentation but can cause serious complications like secondary glaucoma, complicated cataract and atrophic bulbi if not diagnosed and treated on time. Also, the treatment modalities as per modern medicine includes cycloplegics, Steroids, immunosuppressive and immunomodulators, which are well known for their side effect in form of drug induced glaucoma, complicated cataract, decreased immunity and several others.

So there is a need of collaboration of different systems of medicine to overcome this overwhelming disease entity. Thus, understanding of concepts of ayurveda and its treatment about anterior uveitis can be helpful in this objective. In Ayurveda, as not only the symptoms but also the complications of anterior uveitis are very much simulating with *pittaja* and *raktaja adhimantha* complex of *sarvagata vyadhies*, the disease can be correlated to *pittaja* and *raktaja adhimantha* complex.

Looking into the ayurvedic modalities for the treatment purpose, it is important to understand that the procedures and drugs described in the treatment part are *Piita shamaka* and *rakta shodhaka*. Also the drugs having the anti-inflammatory and immunomodulatory properties, which are the very essential for the treatment of uveitis.

## REFERENCES

1. Khurana A K, Comprehensive Ophthalmology, 5th edition, New Age International (P) Ltd, New Delhi, 2012; 180.
2. Parsons' Diseases of the Eye, Edited by Ramanjit Sihota & Radhika Tandon, 22<sup>nd</sup> edition, Reed Elsevier India Private Limited, New Delhi, 2015; 235-241.
3. Susruta Samhitha of Susruta, Uttara Tantra 6/14-15, edited with Ayurveda Tattva Sandeepika Hindi Commentery by Kaviraja Ambika Dutta Shastri, Vol II, Chaukhambha Sanskrit sansthan, Varanasi, 2010; 35-36.
4. Susruta Samhitha of Susruta, Uttara Tantra 6/18-19, edited with Ayurveda Tattva Sandeepika Hindi Commentery by Kaviraja Ambika Dutta Shastri, Vol II, Chaukhambha Sanskrit sansthan, Varanasi, 2010; 36.
5. Ashtanga Hridayam of Vagbhata, Uttarasthana 15/9, edited with Nirmala hindi commentary by Dr. Brahmanand Tripathi, Chokhamba Subharti Prakashan, Varanasi, 2007; 985.
6. Ashtanga Hridayam of Vagbhata, Uttarasthana 15/13-14, edited with Nirmala hindi commentary by Dr. Brahmanand Tripathi, Chokhamba Subharti Prakashan, Varanasi, 2007; 986.
7. Susruta Samhitha of Susruta, Uttara Tantra 10/3-12, edited with Ayurveda Tattva Sandeepika Hindi Commentery by Kaviraja Ambika Dutta Shastri, Vol II, Chaukhambha Sanskrit sansthan, Varanasi, 2010; 35-36.

8. Susruta Samhitha of Susruta, Uttara Tantra 12/3-16, edited with Ayurveda Tattva Sandeepika Hindi Commentery by Kaviraja Ambika Dutta Shastri, Chaukhambha Sanskrit sansthan, Varanasi, 2010; II: 58-60.
9. Ashtanga Hridayam of Vagbhata, Uttarasthana 1/3-27, edited with Nirmala hindi commentary by Dr. Brahmanand Tripathi, Chokhamba Subharti Prakashan, Varanasi, 2007; 989-993.