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# Anterior Uveitis and management in Ayurveda - A Case Study

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## ABSTRACT

Anterior uveitis is inflammation of the Uveal tissue from iris upto Pars plicata of ciliary body, which is a common cause for painful red eye. It usually affects people of 20 -50 years of age and account for 10 -15% of cases of legal blindness in developed countries. Depending on the clinical presentation it can be categorised as Iritis, Cyclitis or iridocyclitis. It is typically characterized by photophobia, pain, ciliary congestion, Blurred vision, Keratic precipitates, Aqueous flare and cells and often pooled with Auto immune diseases. If untreated, it can cause permanent visual loss and serious complications such as glaucoma, cataract, and cystoid macular oedema, Retinal detachment. Reducing the inflammation with the help of steroids, Immunosuppressant (topically, systematically) are the treatments indicated in contemporary science but these have their own side-effects and many entities are such that the recurrence rates are very high in spite of treatment or will be non-responsive. So it is coherent to adopt Ayurvedic treatment principles to resolve the ailment securely and to overcome the magnitudes of recurrence. The clinical features of Anterior Uveitis simulates to *Pittaja* and *Raktaja Adhimanta* to a greater extent and treatment modalities can be adopted based on *Doshas* and *Samprapthi* involved. In this paper, a special case report of a 51 years old male patient with Anterior Uveitis who showed marked improvement with Ayurvedic management is presented. The possible role of *Ayurveda* in its management and mode of action is also discussed here.

**Key words:** Anterior Uveitis, Adhimantha, Jaloukavacharana, Mahavasakadi Kwatha.

## INTRODUCTION

Anterior uveitis is the most common form of intraocular inflammation of the Uveal tissue from Iris upto the Pars-plicate of Ciliary body that affects the individual with significant distress and potentially long lasting sight threatening complications.<sup>[1]</sup> The prevalence of uveitis which was estimated to be

around 17.4 per 100,000 in 1960's, in a more recent investigations has been reported to be 52.4 per 100,000 people and the incidence being uprising. This condition is typically characterised by photophobia, lacrimation, Blurred vision, Pain, Ciliary congestion, Ocular tenderness, Keratic precipitates, aqueous flare and inflammatory cells that can be detected by slit lamp bio microscopy.<sup>[2]</sup> Clinically it may present as Acute or chronic anterior uveitis. Theaetiology for the origin of this inflammatory process can be of Exogenous infection (Where in the infecting organisms directly gain entrance in to the eye from Outside), Endogenous infection (Caused by the entrance of organisms from some sources situated else where in the body, through blood stream, Immune related origin (due to Microbialallergy, Autoimmune reaction, Anaphylactic) or Idiopathic.

Inflammation of the uvea fundamentally has the same characteristic as any other tissue in the body- Avascular and cellular response. However due to

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extreme vascularity and looseness of the Uveal tissue, the inflammatory responses are exaggerated and thus produces special outcome.

Iris becomes oedematous due to water logging in active phase, and gives Muddy appearance. While in chronic phase, atrophic changes occurs. Due to inflammatory changes, nodules named Koeppe's and Bussaca are formed on Iris.<sup>[3]</sup> Because of fibrin rich exudates in anterior or posterior chamber, adhesions of Iris to lens or cornea occurs i.e. formation of synechiae, resulting in irregular shaped pupil (Festooned pupil). Synechiae may further lead to the secondary glaucoma. Sometimes synechiae and fibrinous exudates leads to the formation of complicated cataract and cyclitic membrane.

Reducing the inflammation with the help of Cortico steroids, NSAIDs, Immunosuppressant (topically, systematically) and preventing the posterior synechiae with long acting cycloplegic agent are the treatments indicated in contemporary science. However systemic complications limit their clinical application.

In *Ayurveda* this clinical features can be correlated with the *Pittaja and Raktaja Adhimantha*<sup>[4]</sup> of *Sarvagata Netrarogas*. Symptoms of acute anterior uveitis include pain, photophobia, redness, lacrimation, blurred which are described in *Pittaja* and *Raktaja Adhimantha*. Symptoms of *Pittajaadhimantha* due to vitiated *Pitta Dosha* includes burning sensations (*Vahninevad Dahyate* and *Ksharenksatamam Eva*), congestion (*Raktarajichitam*) and discharge (*Sasvedam*), inflammation with headache (*Shiro-Dahayutam*). While *Raktaja Adhimantha* includes more aggravated form of *Pittaja Adhimantha*. Symptoms are severe congestion (*Bandhujeeva Pratikasham*), Pain on touch (*Sparsh-Akshamam*), pricking pain (*Nistoda*) and ciliary congestion (*Raktanimagnaarishta Vat Krishnabhaga*).

*Virechana* and *Raktavisravana* are the *Sarvadehika* procedures described in *Pittaja Adhimantha Chikitsa*.<sup>[5]</sup> *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* 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 Shamana*.

## MATERIALS AND METHODS

### Case Report

**Presentation:** A moderately built male patient aged about 51 years presented to the Shalakya Tantra OPD of SKAMCH & RC on June 28, 2017 with chief complaints of redness, watering and pain in both the eyes since 2 days and this was the 4<sup>th</sup> episode he had experienced in this year. He also mentioned the re-occurrence of symptoms over the past 10 years.

**Complaint History:** Patient was diagnosed with Rheumatoid Arthritis in the year 2016 and he is on medication. In the year 2006 patient gradually developed multiple joint pain for which he used to take analgesics to get rid from the pain. In the same year in the month of November he developed severe redness and pain in right eye and consulted ophthalmologist where in he got all the investigation done and referred to Immunologist and diagnosed as Rheumatoid Arthritis and started taking Tab Folitrix, Celdol, Tab Folvite in tapering doses. For eye complaints as per Ophthalmologist advice, took treatment for about 5 months and got satisfactory relief. He used to have 1 to 2 recurrent episodes of Redness, lacrimation, pain in both the eyes annually and symptoms used to relieve with treatment. But this year(2017) he noticed 3 episodes with the last episode lasting approximately 40 days with treatment (fluorometholone ointment, homatropine eye drops, Prednisolone acetate eye drops, Nevanac eye drops). Again after 15 days of treatment he started noticing severe pain, redness, lacrimation in both the eyes and the throbbing pain was in such an extent that he could not blink his eyes and he did not availed the past treatment as per one of his friend's opinion he visited our hospital, SKAMCH & RC on June 28, 2017.

Presently there is no signs and symptoms pertaining to Rheumatoid Arthritis and takes Tab Folitrix, Tab Folvite and a Multi vitamin for the same.

For Presbyopia, using +2.5 D Spherical lens for both the eyes.

**Examination**

**Visual Acuity**

Visual Acuity	Distant Vision (without)	Near vision (without)	Nearvision (with Lens)
BE	6/6	N9 <sub>p</sub>	N6
OD	6/6 Partial	N18	N6
OS	6/9	N18 <sub>p</sub>	N6

Both eyes showed smooth, accurate, full and equal extraocular muscle movements in all fields of gaze. No pupillary defect was observed, and no notable photophobia was reported in either eye. Finger counting confrontation visual fields were full OD and OS.

**Slit lamp Bio microscopy**

Circum ciliary congestion was present in both the eyes, mild cellular deposits were seen on the back of the cornea, Anterior segment findings, demonstrated 1+ circumlimbal flush with trace of inflammatory cells and flare in OD and OS

**Schiotz tonometry**

IOP was 13 mmHg OD and 14 mmHg OS

**Ophthalmoscopy examination**

Showed a normal retina with healthy maculae and vasculature and normal optic cup-disc ratios with healthy optic nerve head rims and distinct disc margins in both eyes.

On the basis of clinical findings, the patient was diagnosed with recurrent, mild, chronic anterior uveitis of both the eyes and educated about his findings, prognosis and treatment options.

**Treatment course at the hospital and observation**

Date	Treatment	Observation
26/06/17 to 03/07/17	Chittrakadi Vati 0-2-2 B/F Panchkula Choorna 0-1/4-0 tsf	
4/7/2017	Snehapana with	

to 7/7/17	Mahatriphala Ghrita. 30ml,70ml,110ml,150 ml (4 Consecutive Days)	
8/07/17 to 10/07/17	Sarvanga Abhyanga with Dhanwantharamtaila followed by Sarvanga Bashpa Sweda	
11/07/17	Virechana with Trivrit Lehya- 60 g	
12/07/17 to 14/07/17	Samsarjana Karma	25% reduce in Ocular pain and redness in both the eyes, lacrimation persists.
16/07/17	Raktamokshana with Jaloukavacharana 1 sitting.	
17/07/17 to 21/07/2017	Bidalaka with Yashti and Triphala	Redness of eye Ocular pain completely reduced. No photophobia. 50% reduce in lacrimation. Signs: Complete reduce in ocular tenderness. Flare and inflammatory cells are persist.
17/7/2017 to 17/8/17	Mahavasakadi Kashaya 50 ml once daily B/F	100% relief in redness, ocular pain, lacrimation, photophobia, ciliary congestion and 75% relief in aqueous flares and inflammatory cells

**Follow-up:** After the completion of treatment following parameters were observed which helps to assess the efficacy of treatment.

Observation	Before treatment		After treatment	
	OD	OS	OD	OS
Redness	Severe	Mild	Absent	Absent
Ocular Pain	Present	Present	Absent	Absent
Lacrimation	Present	Present	Absent	Absent
ocular tenderness	Present with Difficulty in blinking.	Present with Difficulty in blinking.	Absent with easy movement of lids.	Absent

Photophobia	Present	Present	Absent	Absent
Ciliary congestion	Mild	Absent	Absent	Absent
Flares	+++	++	+	+
Inflammatory cells	++++	++	++	+

## DISCUSSION

Factors reported to induce Anterior uveitis (*Pittaja Adhimanta*) in this case were *Alpa Vyadhi Kshamatva*, *Nidra Vega Dharana* (*Swabhava Bala Pravritta Nidana*), *stress* (*Manasika Nidana*) excessive intake of *Masha, Dadhi* (*Aharaja Nidana*) which is having *Guru* and *Snigdha Guna* leading to *Mandagni*.

All these *Nidanas* causes *Tridosha Prakopa* leading to *Agnimandya* which favours *Amotpatti*. The vitiated *Ama Dosha* moves *Sarva Shareera* through *Siras* and *Dhamani* including *Uttamanga* and takes *Sthana Samshraya* in *Netra* and *Sarva Shareera*. In *Netra* it vitiates *Sthanika Pitta* and produces the symptoms and in *Vyaktavasta* it can be called it as *Pittaja Adhimanta*. It is being suggested that failure of the ocular immune system and the disease resulted from inflammation are the main cause for Anterior uveitis. When these causes mentioned above present in body, the homeostatic conditions can be upset and auto-reactive T cells allowed to proliferate and migrate to the eye. These cells in the eyes, release several inflammatory cytokines, which results in certain inflammatory changes in the form of vascular changes and cellular changes. Blood vessels of Uveal tissues dilate and blood ocular barrier becomes broken, resulting in collection of inflammatory cells in anterior and posterior chamber.<sup>[6]</sup>

The planning of treatment was done in the way such that therapies and medicaments had *Shotaghna*, *Srotodusti Nirharana*, *Pitta Hara*, *Kaphahara* and *Chaksuhya* properties.

Anterior uveitis is due to vitiation *Tridosha* predominantly *Pitta Dosha* and vitiation is because of a generalized pathology and not because of indigenous cause. Hence *Kaya Shodhana* becomes mandatory to eliminate the disease from the core.

As *Ama Lakshanas* were there *Deepana* & *Pachana Karma* was done with *Chitrakadi Vati* and *Panchakola Choorna* for 5 days.

In *Snehapana*, lipids are processed with medicine which are having the active ingredients that acts on the particular disorder by crossing the cell membrane. By this, the functions of phospholipids will increase the affinity of cellular elements or *Doshas* which are responsible for the formation of diseases and the lipids helps to loosen the pathogens which can be understood as *Dosha Utkleshana*. In this case *Mahatrihala Ghrita* is chosen to reach the target organ *Chakshu* as it is *Chakshushya*.

*Abhyanga* or external oleation and *Swedana* or sudation therapy helps to drain the impurities towards the gut, as well as in the form of excretion.

*Virechana* was the choice of *Panchakarma* in this patient as it is meant for *Pitta* and *Kapha Dosha*, which are also the components in pathogenesis in this condition. When the medicine is administered to the patient orally, after the complete digestion, the action of given medicine starts. The active ingredients of the medicine will stimulate the mucosal membrane and changes the normal permeability of mucosal lining temporarily, due to which the *Doshas* are transferred from cellular level to gut level with the help of *Snehana* and *Swedana Karma* are expelled out through Anal route.

*Jaloukavacharana* is having an important role in treating *Pittaja* and *Raktaja Netra Rogas* by doing *Raktashodhana*. When leeches are applied over the site they inject biologically active substances through saliva, *Calin*, *Eglin* have anti-inflammatory properties that helps in arresting inflammation, vasodilators like acetylcholine, histamine increases the blood flow at the affected area and during sucking of blood and hyaluronidase facilitates the penetration and diffusion of pharmacological active substances into the deeper tissue. *Jaloukavacharana* in Anterior uveitis not only accelerates the healing process, but also to avoid the recurrence and the formation of synechias. Thus the application of *Jalouka* in this case contributes to the rapid regression of signs and symptoms such as pain, redness, congestion and aqueous cells.

*Bidalaka* is one of the ocular therapeutic of Ayurveda in which drugs are made into paste form and applied to the outer surface of the eyelids. Medicine applied on the outer surface of lids is absorbed by the skin to a greater extent and reduces the local temperature there by relieves inflammation, imparting soothing effect and relieving pain. Since tissue contact time is more, *Bidalaka* helps in large absorption of drugs. As *Triphala* and *Yashtimadhu* have anti-infective, analgesic and anti-inflammatory properties, so patient could get quick relief from the symptoms.

The ingredients of *Mahavasakadi Kwatha* are *Vasa*, *Nagara*, *Nimba*, *Patola*, *Katuki*, *Guduchi*, *Raktachandana*, *Kutaja*, *Indrayava*, *Daruharidra*, *Chitraka*, *Shunti*, *Bhoonimbha*, *Dhatri*, *Haritaki*, *Vibhitaki*, *Yava*. Maximum of number of drugs are having *Tikta-Kashaya Rasa* and *Laghu-Ruksha Gunas*, by this they does *Pitta-Rakta Shamana*, *Ushna Virya* and *Laghu-Ruksha Guna* and *Katu Vipaka* of drugs like *Vasa*, *Nimba*, *Musta* helps in penetrating into *Sookshma Srothas*, thereby relieving *Sanga* helps in bringing *Srotho Sthirata* and *Mriduta*.

The active principles like Catechins, quinines of *Musta* by enhancing phagocytosis acts as immune modulator, The bio active constituent Berberine present in *Daruharidra* also blocks the release of cytokines thereby by acting as anti-inflammatory and the Curcumin in *Haridra* inhibits the release of the pro-inflammatory cytokine TNF- $\alpha$ . Thereby the combination of these drugs helps in reducing the symptom of redness. The presence of different active components in *Triphala* such as Gallic acid, chebulic acid, ellagic acid, flavonoids, phenols responsible for effective immune stimulatory and immunosuppressant properties helps to improve immunity thus acted well in anterior uveitis.

## CONCLUSION

Reducing the inflammation and Restoration of structural integrity in anterior uveitis was the objective of treatment in this case. Ayurveda treatment principles helped to arrest the rate of

inflammation and to reduce the rate of reoccurrence which are evident by subsequent follow-ups. The treatment indicated in modern science have their own side-effects and reluctant to give promising results in the recurrence associated with compromised immunity. In Ayurveda, with the sound understand in of *Samprapthi*, *Dosha* involvement, which are pivotal for proper implication of *Shodhana* (detoxification) and *Shamana* (palliative) definitely have an upper hand in providing promising results. To further validate and standardise the treatment protocol a pilot study with different combination and a large sample study always holds good.

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