AYURLINE
I J – R I M
e-ISSN: 2456-4435
Oct- Dec 2022
Vol. 06th Issue:4th
International Journal of Research in Indian Medicine

Management of the juvenile idiopathic arthritis (JIA) associated anterior uveitis with special references to *Pittaja Adhimantha*, by an *Ayurvedic* and modern aspect- a single case study.

Telgote Dipika*[1], Dakhore Jyoti[2], Waghmare Ramesh[3]

[1]PG Scholar, Shalakyatantra Dept.,
[2]H. O. D and Asst. Prof. of Shalakyatantra Dept.
[3]H. O. D. and Asst. Prof. Of Rog Nidan Dept.
Vidarbha Ayurved Mahavidyalaya, Amravati, Maharashtra, India 444606.

***Corresponding author:** telgotedrdipika@gmail.com

ABSTRACT:

Juvenile Idiopathic Arthritis (JIA) and chronic uveitis is defined as arthritis at least 6 weeks of duration without any identifiable cause in children younger than 16 years. This is the most common cause of uveitis in children. The uveitis strictly means the inflammation of uveal tissue only. But practically, there is always some associated inflammation of adjacent structures such as retina, vitreous, sclera, cornea. The uveitis classified on the basis of anatomical, clinical, etiological, and pathological. The International Study Group described anatomical classification. So, it classified into anterior, intermediate, posterior, pan uveitis. The anterior uveitis is inflammation of uveal tissue from iris up to pars *plicata* of ciliary body. This term include iritis, *iridocyclitis*. The Standard uveitis working group has described the disease acute, chronic and recurrent on the basis of its course. Main symptoms of acute anterior uveitis are pain, photophobia, redness, lacrimation and decreased vision. In chronic uveitis, eye may white with minimal symptoms even in the presence of sign of severe inflammation. Our aim is to assist in diagnosis and short term and long term treatment of ayurveda and modern can prevent possible serious complication such as Cataract, Glaucoma, Retinal complication etc. Anterior uveitis is mostly correlated with *Pittaja Adhimanth* in *Ayurveda*. The sign and symptoms in anterior uveitis can be compared with *Pittaja Adhimantha* and its treatment on the basis of *Doshas* and *Samprapti* in Ayurveda. In this paper, a special case study of a 34 years old male patient with anterior uveitis who showed marked improvement is presented.

KEYWORDS: *Pittaja Adhimantha*, Anterior uveitis, Cataract, Glaucoma.

INTRODUCTION: Juvenile idiopathic arthritis formerly is also known as juvenile rheumatoid arthritis or chronic arthritis which is an inflammatory disease of the joints that affects children under the age 16 years. It is an autoimmune disease. In JIA, healthy joints of body are attacked by white blood cells which causes inflammation of joints, it can make walking difficulty. Fever and rashes are also common symptoms [1]. Several classification systems exist for juvenile arthritis which divides the chronic juvenile *arthritides* into 3 broad categories: a. Juvenile – onset *spondyloarthropathies* (*JOSpAs*) b. Juvenile idiopathic arthritis or Juvenile rheumatoid arthritis c. Other arthridies in childhood (Sarcoidosis). *JOSpAs* include juvenile ankylosing spondylitis, reactive arthritis, inflammatory bowel disease – related arthritis - 3 also collectively known as enthesitis – related arthritis - and psoriatic arthritis. JIA is further classified into 3 categories: 1. Systemic *Oligoarticular* 2. *Polyarticular* 3. *Oligoarticular*.

Juvenile ankylosing spondylitis is a chronic arthropathy that predominantly affects boys after the age 10 years. Patients have the history of back pain, radiographic involvement of sacroiliac, lumbosacral spine and peripheral arthritis together with enthesitis. More than 90% of patients are HLA-B27 positive. Recurrent attacks of symptomatic acute anterior uveitis can develop, in contrast to the chronic asymptomatic *iridocyclitis* of JIA and also affects typically only one eye at a time, although the inflammation can switch back and forth between eyes. This is typical presentation of acute anterior uveitis [2].

Uveitis is the inflammation of uvea with adjacent structure, may cause of number of different aetiologies. Anterior uveitis is defined as presence of cells or cellular aggregates that are visible in the anterior chamber during examination. In chronic condition, excessive infiltration of neutrophils, macrophage, and lymphocytes may cause permanent damage to ocular tissue. So, pathophysiology of chronic or persistent stage, there is a vascular and a cellular response due to extreme vascularity and looseness of uveal tissue. The inflammatory responses are exaggerated and thus, produce special results [3].

Table no. 1 SUN Working Group Description of Uveitis [4]:

Onset	Sudden or insidious
Duration	Limited (3 months or less) or persistent
Clinical course	Acute – Episode characterized by sudden and limited duration Recurrent – Repeated episodes separated by periods of inactivity without treatment > 3 months in duration Chronic – Persistent uveitis with relapse in < 3months after discontinuing treatment

Pathogenesis of anterior uveitis associated JIA is unknown. JIA associated uveitis is bilateral and non – granulomatous with fine to medium sized *keratic* precipitates. But some have granulomatous precipitates seen. Chronic inflammation may produce Band keratopathy, Posterior *synechiae*,

ciliary membrane formation, *hypotony*, cataract, glaucoma and phthisis. The exception cases is male patients with HLA-B27 positivity who may present with severe inflammation and the typical symptoms of redness, pain and photophobia.

In *shalakyatantra*, symptoms and signs of anterior uveitis correlated with *Pittaja* adhimantha. *Adhimantha* is *a netrarogat, sarvagat vyadhi* [5]. The disease can be categories into *vataja, pittaja, kaphaja, raktja* [6]. The symptoms of *piitaja adhimantha* are produced due to vitiated piita doshas in which *Vahniwvad Dahyate, Ksharenksatamam Eva* (Burning sensation), *Raktarajichitam (*congestion) and *Stravi* (Discharge)*Shiro – Dahayutam* (Inflammation with headache) [7]. The anterior uveitis with JIA can be treated with *Ampachana* (digestion of morbid factors of the body, *Virechana* (medicated, purgation) *Sothahara* (anti –inflammatory), *Vedananashaka* (Analgesics), *Stravhara, Shanika chikitsa* (local measures) and *Pittahara chikitsa* (piita morbid factors pacifying treatment of *Ayurveda*).

MATERIALS AND METHODS: This clinical case is studied in *Shalakyatantra* OPD of shri G.N.T. Hospital and *Vidarbha Ayurved Mahavidyalaya, Amravati, Maharashtra* - 444606. This case is treated with *ayurvedically* as well as allopathically.

CASE REPORT: A 34 years old male patient diagnosed Juvenile idiopathic arthritis associated with anterior uveitis. He was complaining blurred vision, watering of eyes, redness in eyes, dull aching and throbbing sensation eye ache was worsted at night, ocular pain referred to forehead and scalp. He had been experiencing above symptoms since 10 to 15 years. He consulted Rheumatologist. On dated 13/4/2009, he has bilateral Hip deformity, ankylosing spondylosis, Osteoporosis, Reactive Arthritis etc. and did the all investigation i.e. Hematological report, CRP, RA factor, X ray on dated 8/4/2009.

X-Ray Chest – Normal

X- Ray L.S. Spine with pelvis (AP) and L.S. Spine (Lateral) – Scoliosis of lumber spine seen.

Skin Test - A. *Montoux* Test – Negative

And then diagnosed. Also took the treatment of this disease i.e. tab. MEXT 10 mg on every Tuesday, Tab. *Folvite* 5 mg Daily except Tuesday, Tab. Aciloc –RD on Monday, Tab. Flurish 150 mg per month. This treatment was taken by patient for 4 months on dated 19 /8/2019. He received the medication corticosteroid eye drops i.e. *Predforte* eye drop, *mydriatic* eye drop i.e. Atropine eye drop on dated 3/12/2021in our hospital. This was the 5th episode of this disease. Because of the recurrence of this disease, he came to shri. G.N.T. hospital on dated November December 2021.

On examination

(A) General examination

- General condition: Anxious
- Anemia: Mild Microcytic Hypochromic Anaemia
- Lymphadenopathy, Cyanosis, Dehydration : absent
- Pulse:78 beats per minute
- B.P: 130/80 mm Hg
- Temperature: 98.6 ^{0}F
- Weight: 50 kg

SYSTEMIC EXAMINATION:

- Respiratory system: Bilateral equal air entry with normal

vesicular sound heard.

- Skin: Normal pigment with texture. Not any abnormality detected.
- Cardiovascular: S1S2M0
- Central Nervous system: Oriented with time place and person, good judgment and insight.
- Musculoskeletal system :
- Gait: Not straight and not erect.
- Arm: Not erect and straight, Restricted movement, Difficult to deliver, Stiffness of joint
- Leg: Not erect and straight, Restricted movement
- Spine: stiffness and deg +
- Hip: Ankylosed

Ocular examination

Head Posture**:** Forward

Facial symmetry: Bilateral symmetrical of eyebrows

- Symmetrical Naso-labial fold
- Symmetrical angle of mouth

Ocular posture: B/L visual axis was parallel to each other in primary position of gaze.

Table 2: Visual Acuity

On Snellen Chart, visual acuity:

	Before	Treatment	After	Treatment
	Right	Left	Right	Left
V/A	6/9	6/9p	6/9	6/9p
PH	6/6p	6/6p	6/6	6/6p

BE: Semiclosed due to photophobic.

Eye lashes

BE- Normal in color, contour, direction eyelashes. Direction of cilia: Normal, straight.

Conjunctiva

RE: *circum* ciliary congestion+

LE: *Circumcilliary* congestion ++

Sclera: Moderate *circumciliary* congestion LT eye

Cornea : Clear, Transparent, Normal in shape, size, sensation

Anterior Chamber: Both are Normal.

Pupil:

Site: slightly nasal eccentric

Number: single,

Pupil Shape: Right eye - Irregular, Dilated

Left eye - Not reacting to light, Sluggish reaction to the light

Reflexes: RT eye - PNSRL, *Mydriasis*

LT eye pupil: Posterior *synechaie*, *miosis*, occluded or blocked

Lens: Iris pigments over lens of both eyes

Observations	Before Treatment		After Treatment	
	Right	Left	Right	Left
Eye ache	moderate throbbing pain	dull aching, throbbing sensation, worsted at night more in left	Mild eye ache	Occasional dull aching and throbbing pain
Ocular pain	Present ,referred to forehead, scalp	more pain and referred to the forehead and scalp	Occasional	Occasional
Lacrimation	Moderate	More in left eye	Absent	Occasional
Ocular Tenderness	Moderate	More	Absent	Absent

Photophobia	Semiclosed eye	Semiclosed eye	Present	Present
Ciliary congestion	Moderate	More Redness	Absent	Mild Occasional
Keratic precipitate	Absent	Moderate, fine KP's	Absent	Fine KP's

Fundus evaluation

- Both eye fundus examination
- Fundus Examination - Normal
- RT Disc cupping - 0.4
- Blood vessel - Normal

TREATMENT

The patient was admitted in the G. N. T. Hospital and Vidarbha Ayurved Mahavidyalaya, Amravati for 7 days. The following line of treatment was executed.

ALLOPATHIC TREATMENT

For right eye Predforte eye drop 1 drop for 2 times then tapered next week and for left eye 1 drop three times for a week then tapered for next two weeks. As well as for left eye , Atropine eye drop 1 drop two times per day .and follow up after 1 months.

AYURVEDIC TREATMENT:

Amapachana

a) Tab *Amapachak vati* 250 mg 2 tab 2 times per day for first day.

***Sadhyovirechana*:** Purgation done by *SunthiSidha eranda tail* 10 ml with 100 ml *Koshna jala*.

***Snehan*:** *Mahavish garbha tail* two to three times.

Oral Medication

a) *Sudarshana churna* 2gm TDS a daily for 7 days [8].

b) Sinhanad Guggulu 250 mg one tab twice a daily for 7 days [9].

c) *Rasna saptak kwath* 15 ml three teaspoonful thrice a daily for 7 days [10].

d) *Vatvidhwans Ras* 250 mg one tab twice a daily for 7 days [11].

e) *Rasna, Devdaru, Erandmul, Punarnava, Dashmul churna* for 7 gm each content. Cap. Arthoplus gold 1 tds / day.

Follow up: After 1months

RESULTS:

After efficacy of the treatment following parameters observed which helps to assess the efficacy of the treatment: Tables No. 3

A short course of 7 days. On first day patient was complaining of redness, photophobia, pain, watering and blurredness of vision. On his third day of treatment patient classical signs and symptoms were reduced by 50%. In comparison to his first day, almost symptoms reduced on the 7th day (last day) of treatment.

DISCUSSION:

Juvenile idiopathic arthritis is a most common rheumatic rheumatic disease of childhood. Anterior uveitis is the intraocular inflammation of uveal structure. Disease is associated the ocular trauma, masquerade disease, systemic disease including idiopathic, infectious, non- infectious disease like Ankylosing spondylitis is an idiopathic chronic

inflammatory arthritis, usually involving the sacroiliac and posterior inter- vertebral joints. The disease affects the young males (20 to 40 years) who are HLA-B27. About 20 to 30 % patients with ankylosing spondylitis develop uveitis.

Primary objective of management of JIA associated with anterior uveitis are

1. Restoration of good visual function
2. Providing the relief from eye ache, ocular pain, cilliary congestion, photophobia etc.
3. Prevention of serious possible complication like cataract, glaucoma, synechiae, retinal complication etc.

The management of anterior uveitis includes use of steroid, mydriatic, cycloplegic, NSAID, immunosuppressive agent etc.

In *Ayurveda, Pittaja adhimantha* can be managed with *Sira vyadhana* or *aushadha*. *Sneha purvaka siramokshya* i.e. *Vyadhan* is indicated after series of *Apatarpana* and *amapahcana*.

The *Aushadha sadhya* protocol follows *virechana, pitta visarpavidhana chikitsa* such as application of medicated thin paste made up of *(Sheeta veerya) usheera and chandhan, Seka, Alepa, nasya and anjana.*

Sudarshana churna, Sinhanad Guggula, Vatvidhwansak ras, Rasnasaptak kwath are *Amapachak, Shothahara, Vednashamaka, and Stravhara.* These above mentioned drugs has antioxidant, antimicrobial, anti-inflammatory, immunomodulative, bitter tonic as well as excellent wound healing properties.

The complete *samprapti vighatana* can be done with rational use of *Ahara vihara* and *Aushadha* and condition can be managed effectively.

Shanika chikitsa (Local measures) adopted include Seka with *triphala, lodhra* and *yashthimadhu kashaya* and *Shanika avagundana* with *Dhanyaka* and *haridra* with *triphala kashaya* which help in mark reduction of signs and symptoms of ocular discomforts.

CONCLUSION:

Depending on the symptoms, signs, *Pittaja Adhimantha* is correlated with clinical presentation of anterior uveitis. In this, JIA associated anterior uveitis can result in blindness. So, it should be diagnosed and treated properly in early on basis of proper history of patient, signs, symptoms, ocular examination such as fundus examination, slit lamp examination, visual acuity test etc. It is a multifactorial autoimmune disorder entity. So, it requires the expert opinion related to this disease. One should consult in case of systemic involvement associated with uveitis.

By undertaking *Ayurveda* principle of *Netra chikitsa* and proper understanding of *nidana, samprapti, rupa* and *lakshana* the above mention disease entity can be managed safely. *Samprapti vihgatana chikitsa* can be done with optimizing *amapachana, pittahara, Shothashamaka, vedanashamaka* as well as local measures of treatment (*seka, avagundana*). As idiopathic is most common form of anterior uveitis. So, it can be managed safely by Ayurveda with due care.

REFERENCES:

1. https://www.aao.org/eye-health/disease/what - is -juvenile - idiopathic – arthritis- uveitis.
2. http://www.aao.org > disease – review/pediatric anterior – uveitis.
3. A .K Khurana. Comprehensive Ophthalmology, 3rd ed. New Delhi: New Age international (p) Limited, Publisher; reprinted 2003. p. 165 -167.

4. Jabs DA, Nussenblatt RB, and Rosenbaum JT. standardization of uveitis Nomenclature (SUN) working group. Standardization of uveitis Nomenclature for reporting clinical data .Results of first international workshop, AM J Ophthalmol. 2005. P.140 -509 -16 (cited on August, 2017).
1. 5. Sushrutasamhita of Maharshi Sushruta Edited with Ayurveda – Tattva – Sandipika by Kaviraja Ambikadutta Shastri. Uttartantra. Ch.6, ver3-4. Reprinted 14thed Varanasi: Choukhamba Sanskrit Bhavan, 2001. p. 26.
2. 6. Sushrutasamhita of Maharshi Sushruta Edited with Ayurveda – Tattva – Sandipika by Kaviraja Ambikadutta Shastri. Uttartantra. Ch. 8, ver8. Reprinted 14th ed. Varanasi: Choukhamba Sanskrit Bhavan, 2001. p. 38.
3. 7. Sushrutasamhita of Maharshi Sushruta Edited with Ayurveda – Tattva – Sandipika by Kaviraja Ambikadutta Shastri. Uttartantra. Ch. 6, ver14-15. Reprinted 14th ed. Varanasi: Choukhamba Sanskrit Bhavan, 2001. p. 27.
4. 8. Sri Govida Das. Bhaisjyaratnawali with Vidhyotani commentary Edited by Brahma Shankar Mishra, Ambika Dutta Shastri and Rajeshwarya Datta Shastri. Jwarchikitsa chikitsa prakaran. Ch. 5, ver.445-454. 13th ed. Varanasi: Choukhamba Sanskrit Bhawan. 1999. p. 79.
5. 9 .Sri Govida Das. Bhaisjyaratnawali with Vidhyotani commentary Edited by Brahma Shankar Mishra, Ambika Dutta Shastri and Rajeshwarya Datta Shastri. Amwatchikitsa chikitsa prakaran .Ch. 29, ver.181-189. 13t h ed. Varanasi: Choukhamba Sanskrit Bhawan. 1999. p.444-445.
6. 10 . Sri Govida Das. Bhaisjyaratnawali with Vidhyotani commentary Edited by Brahma Shankar Mishra, Ambika Dutta Shastri and Rajeshwarya Datta Shastri. Amwatchikitsa chikitsa prakaran. Ch. 29. ,ver.25 . 13th ed. Varanasi: Choukhamba Sanskrit Bhawan. 1999. p. 436.
7. 11 . Sri Govida Das . Bhaisjyaratnawali with Vidhyotani commentary Edited by Brahma Shankar Mishra, Ambika Dutta Shastri and Rajeshwarya Datta Shastri. Vatvyadhichikitsa prakaran. Ch. 26., ver.182-186. 13th ed. Varanasi: Choukhamba Sanskrit Bhawan. 1999

Conflict of Interest: Non

Source of funding: Nil

Cite this article:

Management of the juvenile idiopathic arthritis (JIA) associated anterior uveitis with special references to Pittaja Adhimantha, by an Ayurvedic and modern aspect- a single case study. Telgote Dipika, Dakhore Jyoti, Waghmare Ramesh

Ayurline: International Journal of Research In Indian Medicine 2022; 6(4):01-07