



## JUVENILE IDIOPATHIC ARTHRITIS (JIA) AND AYURVED MANAGEMENT : A CASE REPORT

### Ayurveda

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### ABSTRACT

Juvenile Idiopathic Arthritis (JIA) is the most common type of chronic arthritis that affects children and adolescents. JIA causes joint inflammation and stiffness that affects the functional capacity of the child. The 14 year old male patient had approached Kaumarbhritya OPD of our Ayurvedic hospital with clinical presentation of Pauciarticular JIA with typical involvement of knee and ankle joints inflammation and pain during walking. Patient was on Analgesics & non-steroidal anti-inflammatory medications, which resulted in temporary symptomatic relief but soon patient experienced the recurrence of symptoms on withdrawal of medications. In Ayurveda 'Amavata' is closely correlated with the symptoms of JIA. The treatment based on classical Amavata Chikitsa was applied in this case comprising of Agnideepana, Pachana, Sarvanga Snehana, Valuka Pottali Swedana and Matra Basti treatment. The Ayurved management has significantly reduced the inflammation & improved the quality of life of the patient.

### KEYWORDS

Juvenile Idiopathic Arthritis, Amavata, Ayurveda Management, Panchakarma.

#### INTRODUCTION :

Juvenile idiopathic arthritis (JIA) is a progressive autoimmune disease. It is the most common chronic musculoskeletal disease of childhood and major cause of chronic disability & deformity in severe cases. JIA clinically defined as persistent inflammatory arthritis in one or more joints for at least period of 6 weeks that manifests in patients below 16 years of age. The major subtypes of JIA are based on the symptoms at disease onset and designated as 1) Systemic onset 2) Pauciarticular 3) Polyarticular JIA 4) Psoriatic JIA 5) Enthesitis-related JIA 6) Undifferentiated JIA<sup>1</sup>. Prevalence of JIA with an annual incidence of 1.6 to 23 new instances per 100,000 adolescents<sup>1</sup>. About 1 child in every 1000 develops Juvenile Idiopathic Arthritis type of chronic arthritis<sup>1</sup>. Management of JIA includes use of non-steroidal anti-inflammatory drugs (NSAIDs), immunosuppressive agents, corticosteroids, analgesics for the pain management which causes several adverse reactions and drug dependency. It is imperative that we increase focus on the management and research of JIA. The signs and symptoms observed in JIA are correlated with the clinical features of Amavata Vyadhi mentioned in Ayurvedic classics. In the given study same principals & treatment module given in Ayurveda has been implied for positive outcome.

#### Case Report :

A 14 year old boy attended Pediatric OPD of YMT Ayurvedic medical college and Hospital, Kharghar, Navi Mumbai with chief complaints of severe pain in knee & ankle joints, difficulty in walking, swelling and stiffness more pronounced in the morning since 2.5 years. Due to chronicity of illness and severity of pain, patient has experienced disturbance in routine physical activities & restricted functional capacities which has also affected him psychologically due to his disability to perform age appropriate activities like cycling, running and other outdoor games. No family history of any form of arthritis or any major systemic illness was present.

Patient had past history of chikunguniya infection 3 years ago and was hospitalized for the same. Post recovery followed by generalized weakness, occasional mild grade fever and multiple joints pain. Patient was prescribed dexamethasone, paracetamol & ibuprofen which gave temporary symptomatic relief from fever and pain but on withdrawal of medication, symptoms reappeared affecting the physical abilities of the patient. Patient had reported aggravation in pain on joints mobility during any form of physical activities.

**Table 1. Clinical Examination Conducted On Patient**

<b>1. General Examination</b>	
Vitals Signs	<b>Anthropometry :</b>
H.R -102/mins	Height - 131cm
R.R -27/mins	Weight - 39kg
Axillary temperature- 36°C	BMI - 22.7kg/m <sup>2</sup>
B.P - 105/85 mmHg	
Appearance :	Ocular swelling / infection :
Well nourished , well built	Absent
Patient presented with moon	Muscle weakness : Present, mild

face ( Cushingoid appearance with no palpebral edema ) Pallor/icterus : Absent lymphadenopathy : Absent Eyes : Normal , Vision – normal	Skin : dry skin / No rash present Nails: Brittle Oral ulcer : Present, 2 ulcers on lower lip Urine : normal Stool: hard stool passed. Constipation since 1 week
2. Systemic Examination PA : Soft , No Organomegaly CVS : S1 S2 normal RS : AEBE clear CNS : well oriented muscle power- reduced strength Gait examination- slower walking speed ,shortened step length Muscle bulk: normal	3. <b>Musculoskeletal Examination</b> Inspection : mild, symmetrical , soft tissue swelling of knees, ankle joints Palpation : warm fluctuant and tender to touch , swollen . Reduced range of motion due to pain Limitation of motion : left knee joint –Grade 3 ROM, Right Knee Joint-Grade 3 ROM
<b>Laboratory Investigation</b>	
1. Leukocyte count of	30,300/ $\mu$ l
2. Neutrophil	89.9%
3. Lymphocyte	8.2%
4. Hemoglobin	12g/dl
5. Hematocrit	38.9%
6. Platelets	4,85,000/ $\mu$ l
7. ESR	35mm/hr.
8. CRP	384mh/l
9. Urine microscope	Normal
10. Rheumatoid Factor	Negative
11. Antinuclear Antibody (ANA)	Negative

**Table 2 Showing Treatment Schedule Of Patient With JIA**

<b>First Regimen: Oral medications at OPD level for 15 days</b>		
1. Agnitudi Vati	1 tablet twice a day with warm water before meal	
2. Kaishor Guggul <sup>3</sup>	250mg 1 tablet twice a day with warm water after meal	
<b>Second Regimen : Oral medications on IPD admission for 15 days</b>		
1. Arogyavardhini Vati	250mg 1 tablet twice a day with warm water before meal	
2. Kaishor Guggul <sup>3</sup>	250mg 1 tablet twice a day with warm water after meal	
3. Rasnasaptak Kwath <sup>4</sup>	10ml twice a day with Eranda Sneha 5ml	
<b>Bala Panchakarma Procedure for 10 days</b>		
1. Sarvanga Snehana <sup>5</sup> (Oleation - whole body massage)	With Vishagharbha Taila	
2. Sarvanga Swedana (Sudation - whole body steam)	Valuka Pottali Sweda method <sup>6</sup>	
3. Matra Basti <sup>7</sup>	Saindhavadi Taila 5ml and Sahachar Taila 25ml	

**Assessment :**

The assessment of patient was conducted on 1<sup>st</sup> day before starting the treatment and on 31<sup>st</sup> day after completion of treatment in hospital IPD setting. Table 3 showing the applied parameters of verbal rating scale (VRS score), American college of rheumatology criteria (ARA score)<sup>2</sup>,ACR classification for assessment of functional status<sup>2</sup>.

**Table 3 Showing Assessment Scoring Criteria**

<b>1. Joint Tenderness</b>		<b>2. Joint swelling</b>	
Score 0	No tenderness	Score 0	No swelling
Score 1	Patient reports tenderness upon palpation	Score 1	Mild swelling
Score 2	Patient reports tenderness and winces upon palpation.	Score 2	Moderate swelling
Score 3	Patient reports tenderness, winces, and withdraws their limb upon palpation	Score 3	Marked/severe swelling
<b>3. Severity of Pain (VRS )</b>		<b>4. Limitation of Motion</b>	
Score 0	no pain	Score 0	full range of motion
Score 1	no pain at rest, slight pain on movement	Score 1	1-9% loss of ROM,
Score 2	slight pain at rest, moderate pain on movement	Score 2	10-19% loss of ROM
Score 3	moderate pain at rest, severe pain on movement	Score 3	20-49% loss of ROM
Score 4	Severe pain at rest and on movement	Score 4	50-99% loss of ROM
		Score 5	Ankylosis

(Swelling may reflect synovial proliferation (pannus) or fluid. Apparent swelling includes bony enlargement and thickening of overlying structures (skin/subcutaneous fat) or atrophy of surrounding tissues.)

**5. Functional Status Criteria (ACR Classification)**

Score 0	Completely able to perform usual activities of daily living (self-care, vocational, and avocational)
Score 1	Able to perform usual self-care and vocational activities, but limited in avocational activities
Score 2	Able to perform usual self-care activities, but limited in vocational and avocational activities
Score 3	Limited ability to perform usual self-care, vocational, and avocational activities

(Self-care activities include dressing, feeding, bathing, grooming, and toileting. Avocational (recreational and/or leisure) and vocational (work, school, homemaking) activities are patient-desired and age- and sex-specific.)

**Follow Up :**

Patient was observed during follow up visits, had shown better appetite and digestion, absence of bloating & constipation. Pain was reported only on excessive physical activity

**Adverse Drug Reaction :**

No Adverse drug reaction was observed during treatment and after treatment on regular follow up visits.

**OBSERVATION & RESULTS :**

Oral medication advised on hospital admission was Rasnasaptak Kwath at the dose of 10ml twice/day with Eranda Sneha 5ml and Kaishor Guggul<sup>3</sup> at 250mg twice/day, Arogyavardhini vati 250mg twice/ day was given to maintain the continuous Deepana Pachana effect throughout the Balpanchakarma treatment like sarvanga snehana<sup>5</sup> with vishagarbha taila, Valuka Pottali Swedana<sup>9</sup> and Saindhavadi taila with Sahachar taila matra basti had shown remarkable reduction in Sandhishotha (Joint swelling),Sandhishambha (Joint stiffness) and Sandhishoola (joint pain ) enhancing the overall physical strength & functional capacity in a patient. Table 4 showing assessment results before and after treatment

**Table 4 Showing Results Of Assessment Before And After Treatment**

Sr.No	Assessment criteria score	B.T ( 1st day)	A.T ( 31 <sup>st</sup> day)
1	Severity of Pain (VRS)	3	0
2	Limitation of Motion	L-3 R-3	L-1 R-2

3	Joint Tenderness	2	0
4	Joint swelling	2	0
5	Functional Score	2	1
6	ESR	35mm/hr	16mm/hr
Total Score (maximum 18, minimum-0)		15	4

**DISCUSSION :**

The pathogenesis of Amavata in Ayurveda is caused by the accumulation of Ama (undigested metabolic toxins) and vitiation of vata dosha. Ama blocks the Srotas (bodily channels) and interacts with vata to lodge in sandhis ( joints ), leading to pain , swelling and stiffness<sup>6</sup>. The pathogenesis of Amavata aligns with the autoimmune and inflammatory mechanisms observed in JIA. Ayurvedic management emphasis on Nidana Parivarjana( avoidance of causative or aggravating factors ), Deepana Pachana ( metabolic correction) by introducing the Agnitundi vati in the first phase of treatment and continuing with Arogyavardhini vati in subsequent treatment regimen, helps in improvising appetite, digestion, enhancing liver function and detoxifies Ama. Shodhan therapies ( Balpanchakarma therapy ) matra basti with Saindhavadi taila<sup>8</sup> with Sahachar taila helps in removal of toxins with remarkable reduction in inflammation, stiffness by providing essential lubricants to the joints. Rasnasaptak Kwath (decotion) has anti-inflammatory and vatahara effects ,Eranda Sneha acts as mild purgative, removes Srotorodh ( blockage in body channels) and reduces stiffness & pain. Kaishor Guggul benefits in inflammatory joint diseases<sup>7</sup>, Sarvanga Snehan with vishagarbha taila<sup>5</sup> and Valuka Pottali Swedana<sup>9</sup> relieves the joint stiffness and improves the locomotion of the joints, it also helps in reducing the local swelling & pain. Ayurvedic management of Amavata provides safe, well tolerated , effective & holistic approach in managing JIA by addressing the root cause of the disease.

**CONCLUSION:**

The Ayurveda management of Amavata which correlates clinically with juvenile idiopathic arthritis (JIA) offers a comprehensive and individualized approach . Ayurveda addresses the pathogenesis of Ama (toxins)formation and Vata aggravation through Deepana, Pachana ,Shodhana and Shamana therapies showing a significant reduction in joint pain, morning stiffness , swelling and fatigue. Early integration of Ayurveda significantly reduces the symptom burden , drug dependency & inflammation especially in chronic pediatric cases, leading to long term relief enhancing the immunity , mobility , functional capacity and improving the overall quality of life of the pediatric patient.

**REFERENCES :**

1. <https://www.niams.nih.gov>. Juvenile Idiopathic Arthritis symptoms, types, causes
2. Felson et al.(1995), "ACR Preliminary Definition of Improvement in Rheumatoid Arthritis."
3. Sarangdharcharya, Sarangdara Samhita, Madhya Khanda 7/71-81, Dipika Hindi Commentary by Dr. Brahmanand Tripathi, Chaukhambha Surbharati Prakashan, Varanasi, Reprint-2001
4. Sarangdharcharya, Sarangdara Samhita, Madhya Khanda 2/86-87, Dipika Hindi Commentary by Dr. Brahmanand Tripathi, Chaukhambha Surbharati Prakashan, Varanasi, Reprint-2001
5. Agnivesa, Charaka Samhita, Sutrasthana, Matrasitiyadhyay 5/85-89, Charaka Chandrika Hindi Commentary by Dr. Brahmanand Tripathi, Chaukhambha Surbharati Prakashan, Varanasi, Reprint-2013
6. Madhavkar, Madhavnidanam, Amavata Nidanam 25/6-10, Hindi Commentary by Pandit Shri BrahmaSankar Sastri, Chaukhambha Sanskrit Sansthan, Varanasi, Reprint-2012
7. AMIT LATHER, an Ayurvedic polyherbal formulation Kaishor Guggul: a review, International Journal of Pharmaceutical & Biological Archives 2011; 2(1):497-503
8. Sen GD. Bhaishajya Ratnavali with Hindi commentary by Professor Siddhi Nandan Mishra, Amavata Chikitsa Adhyaya -29. Varanasi: Chaukhambha Surbharati Prakashan;1987,p.612.
9. Dr. G. Shrinivasa Acharya (2006), Panchakarma illustrated, 1<sup>st</sup> edition, Delhi, Chaukhambha Sanskrit Pratisthan, Baluka Swedana Page 215.