

A Case Study on the Ayurvedic Management of Juvenile Rheumatoid Arthritis (JRA)

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Abstract:

Background: Juvenile Rheumatoid Arthritis (JRA) is a type of arthritis which is common in children and adolescents. It is also known as Juvenile idiopathic arthritis (JIA). Juvenile rheumatoid arthritis leads to bone stiffness, swelling and stubborn joint pain in children. The symptoms present in JRA are more comparable with features of *Amavata Vyadhi* mentioned in Ayurvedic classics. JA can be treated by Shodhana and Shaman therapy of Ayurveda which is free from any side effects.

Aim: To assess the effect of certain oral medication with *Purvakarma* (preparatory procedures) and *Panchakarma* procedures (Five-fold measures of Bio-cleansing) in the management of Juvenile Rheumatoid Arthritis (JRA).

Material and Method: 11 years old male child came to Himalayiya Ayurvedic Medical college & Hospital, Dehradun, Kaumarbhritya / Bal roga OPD with complaint of B/L knee joint pain, joint swelling, fever, loss of appetite and weakness. Examination, investigations, and history leads to diagnosis of Juvenile Rheumatoid Arthritis (Amavata).

Total period of treatment was 30 days in which first 15 days for only oral medication and next 15 days for oral medication with *Purvakarma & Panchkarma* therapy. In Oral medications- Eranda Taila, Chitrakadi Vati, Kaishora Guggulu and Rasna Saptaka Kwath was given. In *Purvakarma* and *Panchkarma* procedures, *Sarvanga Snehana* or *Abhyanga* (Full body massage with medicated oil), *Nadi Swedana* (Steam bath) and *Vaitarana Basti* was given.

Result: Assessment was conducted on day 1 and day 30 by using some subjective parameters like severity of pain, tenderness, stiffness and swelling of joints.

Discussion & Conclusion: Oral medication with *Purvakarma & Panchkarma* delivered better result in JRA patient.

Keywords: Juvenile Rheumatoid arthritis, Ayurvedic Management, *Amavata*, Panchkarma.

1. Introduction :

Juvenile rheumatic arthritis (JRA) is chronic inflammatory arthritis in children and adolescents. Rheumatic diseases are a group of diseases by unknown etiology involving the joints and multiple organ system. Juvenile idiopathic arthritis (JIA) is the most common form of childhood Arthritis.¹ Common occurrence of this disease is mainly observed from the ages of 7 to 15, and persisting for more than six weeks. There is a pain in joints, swelling and stiffness (particularly morning stiffness) that lead to a myriad of disabilities with underlying autoimmune

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dysfunction. The term “Juvenile” refers to the onset of symptoms before age 16 years.² Idiopathic means a condition which has not any clear etiology and arthritis is the inflammation of a joint. The term Juvenile rheumatoid arthritis (JRA), Juvenile chronic arthritis (JCA), Juvenile arthritis (JA) is now used today as Juvenile idiopathic arthritis (JIA) and it is not contagious.³ JRA refers to arthritis that remains over six weeks and involves joint swelling and /or painful joint restricted movements.⁴ It has dissimilarity to arthralgia that in which there is joint pain without inflammation. JRA affects both sex equally but more common in females than male-like other rheumatological diseases and its prevalence ranges is 8 to 150 per 100,000.⁵

The main cause of JRA is idiopathic it means no defined cause and an area of active research.⁶ However, the disorder is autoimmune.⁷ The immune system is aggravated by changes in the environment due to mutations in many associated genes. The immune system, which normally helps to fight off harmful, foreign substances such as bacteria or viruses, begins to attack healthy cells and tissues. The result is inflammation which is marked by redness, heat, pain, and swelling. JRA is a multifactorial inheritance that means many factors are involved in causing a health problem. The factors are usually both genetic and environmental, where a combination of genes from both parents, in addition to unknown environmental factors.⁸

The symptoms present in JRA are more comparable with features of *Aamavata Vyadhi* mentioned in *Ayurveda* classics. *Amavata* is a chronic and degenerative disease of the connective tissue mainly involving the joints. Swelling and pain in multiple joints are the main features of *Amavata* (Rheumatoid arthritis). Constant use of incompatible food articles and strenuous exercise immediately after consumption of fatty foods leads to indigestion. This results in the formation of *Ama* which gets circulated throughout the body by *Vyana Vayu*.⁹ Though it is not mentioned for Pediatric field but due to its similar clinical appearance same reference require for Ayurvedic treatment.¹⁰ Prognosis of *Amavata* is very poor especially in those cases where *Tridosha* are involved. The principles of treatment of *Amavata* are *Langhana* and *Swedana*; and drugs having *Tikta*, *Katu Rasa*, *Deepana*, *Virechana*, *Snehapana* and *Basti*. JRA can be treated by *Shodhana* and *Shaman* therapy of Ayurveda which is free from any side effects.¹¹ The treatment is safer, cost effective and traditionally proven. The case described in this article cannot prove it concretely as there is no large data, but it can be helpful to show path towards the Ayurvedic management of Rheumatoid Arthritis.

2. Case Report:

2.1 Basic Information of the Patient:

Age: 11 years

Weight- 31 kg.

Sex: Male

Socioeconomic Status (SES): Lower class.

2.2 Chief Complaints:

Jwara (fever)

Aruchi (loss of appetite)

Alasya (weakness),

Sandhi ruja (joint pain),

Sandhi soppa (joint swelling) and morning stiffness of the joints since, 7 months.

2.3 History of Present Illness: Seven months before, the patient had a gradual onset of joint pain, swelling and stiffness in the left knee joint followed by symptoms in the right knee joint. Occasionally fever was also associated symptoms. The pain was so severe that it was associated with swelling and felt difficulty while initiating any action and aggravated on exposure to cold. Patient has taken allopathic medicine for the same which gave symptomatic relief but not at assured level. Parents tried many doctors in search for cure but disease condition was not improved satisfactorily. After that attendant came to Himalayiya Ayurvedic Medical college & Hospital, Dehradun, Kaumarbhritya / Bal roga OPD for better management and permanent cure of this problems.

2.4 History of past illness: Recurrent UTI from last 2 years.

2.5 Treatment history: Patient has history to many analgesic / pain killers like paracetamol, Ibrufen, Mefenamic Acid etc. for Arthritic complaints and Antibiotics for UTI.

2.6 Personal history:

Diet style – Vegetarian	Pulse rate - 68/min
Tongue – Clear	B.P - 110/70 mmHg
Appetite – Poor	Bowel history - 1-2 times/day
Sleep – Disturb due to severe pain	Bladder history – 5-7 times / day

3. Systemic examination of Musculoskeletal system:

Inspection-	Swelling present on B/L knee joints.
Palpation	Tenderness and temperature present on B/L knee joints and range of Movements was painful.



4. Investigations: Before starting Ayurvedic treatment, investigations were done in relevance to disease condition. Hb: 13.2 gm%; TLC:12,540/cu per mm; ESR:16 at the end of first hour, RA factor: positive and Serum -CRP -Positive.

5. Material and Method: In this study one case of Juvenile rheumatoid arthritis (JRA) was registered and treated with multiple *Ayurvedic* treatment modalities. Total period of treatment

was 30 days in which first 15 days for only oral medication and next 15 days for oral medication with *Purvakarma* and *Panchkarma* therapy.

In Oral medication Eranda Taila, Chitrakadi Vati, Kaishora Guggulu and Rasna Saptaka Kwath was given. In *Purvakarma* and *Panchkarma* therapy, *Sarvanga Snehana* or *Abhyanga* (Full body massage with medicated oil), *Nadi Swedana* (Steam bath) and *Vaitarana Basti* (a type of medicated enema) was given.

6. Treatment Protocol:

Oral medication for 30 days	<ol style="list-style-type: none"> 1) Eranda Snehana - 20 ml at bed time with warm water 2) Kaishora Guggulu - 1 tablet twice a day with warm water after food. 3) Chitrakadi Vati - 1 tablet twice a day with water before food. 4) Rasna-saptaka Kwath - 10 ml twice a day after food
Panchakarma Procedures for last 15 days	<ol style="list-style-type: none"> 1) Sarvanga Snehana or Abhyanga (Full body massage with medicated oil).: with Vishagarbha Taila 2) Nadi Swedana (Steam bath): Sweating is induced by means of steam coming from the fluid which contain many Vata shamak herbs like Bala etc. 3) Vaitarana Basti (a type of medicated enema): Contents of Vaitarana Basti was Jaggery, Rock salt, Sesame oil, Cow's urine etc. in specific ratio.

7. Criteria for Assessment: Assessment was conducted on day 1st and 30th by using some subjective parameters like severity of pain, tenderness, stiffness and swelling of joints.

Severity of Pain	Tenderness	Stiffness of joint	Swelling of joint
Score 3 – Severe	Score 3 – Severe	Score 3- 75% or more reduction of normal range of movement	Score 3 – Severely present
Score 2 – Moderate	Score 2 – Moderate	Score 2- 50% limitation of movement	Score 2 – Markedly present
Score 1- Mild	Score 1- Mild	Score 1- 20% limitation of normal range of movement	Score 1- Slightly present
Score 0 - Nil	Score 0 – Nil	Score 0 - No stiffness	Score 0 – Absent

8. Result: On first follow up after 15 days treatment, symptoms like anorexia, fever, weakness were completely relieved. There was mild reduction in pain, tenderness, and stiffness of joints. After completion of complete treatment of 1 months, there was drastic change in the parameters as:

Parameters	Before Treatment (day 1)	After Treatment (day 30)
Severity of pain	3	1
Joint tenderness	2	0
Joint stiffness	2	0
Joint swelling	3	0

9. Discussion: Effective management of JIA needs a multidisciplinary team approach for preventing the joint destruction and promote growth and development, which is the aim of good management. The main stay of recent treatment protocol is oral medication along with *Purvakarma* and *Panchkarma*. *Ama* (undigested toxic substance) and *vata* are the important components in the pathogenesis of **Amavata** so the line of treatment should be summarized under two main captions i.e., to bring *Agni* (digestive power) to normal state to digest *Ama* and eliminate vitiated *Vata* and *Ama*.

Oral Medications: *Deepana-Pachana* was done by using *Eranda Taila* and *Chitrakadi Vati*. *Eranda Taila* is described to be best for the treatment of *Amavata* due to its *Katu*, *Ushna*, *Sukshma* and *Vataghna* property.¹²⁻¹³⁻¹⁴ *Chitrakadi Vati* was given to improve digestive power and avoid indigestion during course of *Panchakarma* procedure. *Agnitundi vati* can also be given for increases the digestive and metabolic fires (*Agni*) in JIA patients. *Kaishora Guggulu* was given to reduce joint pain. Main properties of *Kaishora Guggulu* are antioxidant, hepato-protective, immunomodulatory, digestive stimulant, carminative and analgesic which can help to heal the inflammation and to restore joint health.¹⁵ *Rasnasaptak Kwatha* is Ayurvedic polyherbal decoction prescribed as *Vata Shamak* property and can be used for pain relief in Juvenile idiopathic arthritis (JIA).

Purvakarma and Panchkarma Therapy: *Abhyanga* provides nourishment due to its *snigdha* (unctuous), *mridu* (soft) and *Picchila* (sticky) qualities. *Abhyanga* (Massage) directly works on *Vata* to bring it back to normalcy. *Abhyanga* along with *Swedana* and *Vasti* removes *Aavarana* and *Srotorodha* (obstruction of channels). *Abhyanga* and *Swedana* together divert the *Dosha* from *Shakha* to *Koshta*. Then *Dosha* can be managed by *Vasti* or other *Panchakarma* procedures. *Abhyanga* reduces hypertonic conditions, improves muscle bulk. *Abhyanga* (massage) of the body by *Vishagarbha Taila*, *Mahanarayana Taila* and *Bala Taila* is very effective in JRA. Massage should be done in direction of hairs (*Anuloma*) starting from the origin end of hairs towards the free ends of hairs. The regular application of *Abhyanga* comes under Trans-dermal purification.

The *Swedana* (sudation) karma is considered as the main treatment of *Vata* roga; due to its *Ushna guna* overcomes the *Sheeta guna* of *Vata*. *Swedana* (sudation) karma relieved in *Sheeta* (cold), *Shoola* (pain), and *Sthambha* (stiffness) in JRA. *Nadi Swedana* with *Abhyanga* facilitates in removal of *Aavarana* and *Srotorodha*. *Nadi Swedana* is very helpful in JRA by relieves spasticity, improves joint mobility or range of motion (ROM).¹⁶

Vaitarana Basti is a specific type of *Basti* that is manlily indicated in the treatment of *Amavata*. *Vaitarana Basti* has very dominant cleansing action. *Vaitarana Basti* done cleansing therapy which can cleanse the closed channels and renovate its normal function. According to modern sciences, the rectum has a rich supply of blood and lymph vessels. Drugs can cross the rectal mucosa like other lipid membranes and entering in general blood circulation so effect of *Basti* seen on whole body.¹⁷⁻¹⁸

10. Conclusion: Juvenile rheumatoid arthritis (JRA) is the most common chronic rheumatologic disease and the most frequent amongst chronic diseases of childhood and adolescents The preferred treatment protocol is effective in reliving the symptoms of JRA patient. Combination of oral medication, *Purva-Karma* and *Pradhan-Karma* was very effective. Though Ayurvedic

medicine is well recognized for its pain management assistance to society, but if this option is tried in JRA and if found to have positive and hopeful effect, it can be a great help for patient suffering from JRA.

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