

Management of Post Fracture Stiffness by *Murivenna Taila Parisheka* with Rehabilitation exercise-A Case Report

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ABSTRACT:

Most fracture and dislocations require a period of cast immobilization for proper healing, which results in joint stiffness and muscular weakness. Western medicine applies physiotherapy in post fracture stiffness. In Ayurveda, Acharya Sushruta has given a separate chapter for fracture and its treatment as *Bhagna Chikitsa*, Sushruta, stated that fracture of young aged person is healed in a short time as compare to old age person. In this case a 25year old female had road traffic accident which got comminuted fracture of distal end of left radius after that she was managed with closed reduction and percutaneous K-Wire fixation and Plaster of Paris (POP) cast were given below elbow for immobilization for 35days. POP cast and K-Wire were removed after 35 days but patient suffered with severe painful restricted movement, stiffness and inflammation still persist at the joint site. For that she was managed with lukewarm *Murivenna Taila Parisheka* along with wrist rehabilitation for 1 time in a day for 30 days and she got relief in pain and improved wrist movement. She had a complete relief in pain, swelling and achieved complete painless range of movement after completion of four weeks of treatment. She started her routine activities from 4th week onwards. This single case reveal that post fracture stiffness can be successfully managed with *Murivenna Taila Parisheka* and patient back to her routine life early.

KEYWORDS: *Bhagna*, *Murivenna Taila*, *Parisheka*, POP, Post fracture stiffness.

Received: 08.08.2022 Revised: 14.09.2022 Accepted: 25.09.2022 Published: 03.10.2022

Quick Response code



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INTRODUCTION:

Fracture is a break in the continuity of bone surface. Fractures occur at an annual rate of 2.4 per 100 population.^[1] The goal of the fracture treatment is to restore the anatomy back to its normal and to restore the normal function of fractured limb.^[2] The three main treatment options for bone fractures are

casting, open reduction and internal fixation; this involves a surgery to repair the fracture frequently, metal rods, screws or plates are used to repair the bone and remain in place, under the skin after the surgery.^[3] During management of fracture general and local complications may occur. Late complications like delayed union, non-

union, deformity, regional pain syndrome and stiffness may arise among them joint stiffness is a common issue faced by most of the patients.

Fracture of a limb results in loss of circulatory control which leads to edema formation, this in turn results in development of adhesions around joints with formation of subsequent stiffness. In Ayurvedic classics, especially in Sushruta Samhita Acharya Sushruta has given various *Alepana* (Therapeutic External Coating) and *Parisheka* (Therapeutic Streaming) to reduce local swelling and inflammation. Acharya Sushruta has given four treatment principles for fracture management which are *Aanchhan* (Traction), *Pidana* (Pressure), *Sankshepa* (Apposition) and *Bandhana* (Bandaging).^[4] Rehabilitation exercises like *Mrutapindadharana* (Holding of Earth ball), *Lavanapindadharana* (Holding of Salt ball) and after gaining proper strength *Pashanpindadharana* (Holding of stone ball) are also mentioned after fracture of hand.^[5] *Murivenna Taila* is used by Traditional practitioner of Kerala as a drug of choice in *Abhighataj Shoola* (Traumatic Pain) as an external application. It is an *Anubhuta Yoga* which is mentioned in Pharmacopeia of Govt. Ayurved College Pharmacy Trivandrum, Kerala. This oil is used in the form of *Pichu*, *Dhara* (Pouring medicated oil), *Bandhana* (Bandaging).^[6] So considering this in this case report patient was treated with *Murivenna Taila Parisheka* in post fracture stiffness after removing POP and K- wire and got efficient result in post fracture stiffness, pain and swelling.

CASE HISTORY:

A 25 years old female patient visited *Shalya Tantra* out door patient department with complaint of pain, full restricted movement, stiffness and swelling at left wrist joint

since one day. Patient had history of road accident and got comminuted fracture of distal end of left radius 35 days back. Patient consulted orthopedic surgeon and close reduction with percutaneous K-Wire fixation was done following Plaster of Paris cast for 35days. POP and K-Wire was removed on 35th day and analgesic tablet Zerodol-SP (Aceclofenac 100mg, Serrapeptidase 15mg and Paracetamol 325mg) in SOS was given as patient had severe pain. After removal of POP and K-Wire she had stiffness at left wrist joint, restricted joint movement, pain on movement and swelling.

CLINICAL FINDINGS:

General Examination: no pallor, icterus, cyanosis, clubbing and lymphadenopathy. Swelling was presented on left wrist joint. On systemic examination; bilateral air entry equal, S₁S₂ heard and patient was conscious and well oriented.

Local examination: surgical mark on left wrist joint laterally, swelling on dorsal aspect of wrist on inspection, on palpation there was severe tenderness. So patient didn't allow to touch and active movements were fully restricted while and passive movements were also not performed due to severe pain. The assessment in relief of symptoms was done on gradation and pain assessment was done by VA Scale (Table-1).

THERAPEUTIC INTERVENTION:

Patient was managed with lukewarm *Parisheka* of *Murivenna Taila* followed by rehabilitation exercises. *Murivenna Taila* was heated indirectly until the temperature of the oil was slightly warmer than body temperature. The cotton pieces dipped in the warm oil and poured by squeezing cotton pieces *Parisheka* was done at left wrist joint for (Figure 1) 10mins 1 time in a day followed by rehabilitation exercise like palmar flexion, dorsi flexion and radial

deviation as advised by orthopedic surgeon (Fig.2). Each exercise was advised to perform for 5-7times after *Parisheka* for 15 mins for consecutively 30days.

OUTCOME:

After 4weeks of *Parisheka* with *Murivenna Taila* patient has significant improvement in stiffness, tenderness, pain and in swelling.

Patient had complete relief in pain, swelling and achieved complete painless range of movement after completion of four weeks of treatment. Pain was assessed by VA Scale (Visual Analogous Scale). She has started her routine activities from 4th week onwards (table-2). Patient was advised for follow up every week up to 30 days. No any annoying effect was found.

Table 1: Assessment Criteria:

Signs & symptoms	Grade 0	Grade 1	Grade 2	Grade 3	Grade 4
Stiffness	No	Mild	Moderate	Severe	-
Tenderness	No	Patient C/O pain	Patient winces	Winces and withdraws the area	Does not allow to touch
Swelling	No	Mild	Moderate	Severe	-

Table 2: Outcome:

Signs and symptoms	BT Grade	AT Grade
Stiffness	03	0
Pain	VAS 9	VAS 0
Tenderness	03	0
Swelling	02	0



Figure- 1: Procedure of Oil Parisheka



Figure-2: Rehabilitation exercise after Parisheka

DISCUSSION:

There are eight ingredients in *Murivenna Taila* named *Kumari* (*Aloe Vera Tourn ex Linn*), *Palandu* (*Allium Cepa Linn*), *Paribhadra* (*Erythrina Indica Lam*), *Karanja* (*Pongamia Pinnata (L)Pierre*), *Shatavari* (*Asparagus Racemosus Willd*), *Madangandhi*

(*Borreria Articularis Linn.f*), *Tamboolapatra* (*Piper Betle Linn*) and *Shigru* (*Moringa Oleifera Lam*) and the base is coconut oil. Among these eight drugs most of the drugs having *Vata* and *Kaphahara* properties and *Nagavalli* and *Kumari* having *Pitta Shamaka* properties. Thus pain and stiffness were

reduced by *Vata Kaphahara* properties of drugs of *Murivenna Taila* and *Pitta Rakta Shamaka* properties of drugs helped to relieve inflammation, which in turn relieved the pain and tenderness. So the functional ability of the patient was improved and *Taila* is prepared in coconut oil which is *Sheeta Veerya* so it reduced inflammation.

It is prepared in *Dhanyamla* which is *Sparsha Sheetata* so, it reduced *Kshatoshma*. So, the overall effect of *Murivenna Taila* was found is *Tridoshashamana*. *Ushna Parisheka* of *Murivenna Taila* cleared corresponding *Srotoavarodha* (Obstruction of micro channels) and *Agni* (Digestive Fire) was corrected. *Ushna* (Hot) and *Snigdha* (Lubricating) properties of *Taila* pacified *Vata Dosha* which relieves obstruction thus; bone and joints were nourished.^[7] So, stiffness was relieved and movements were initiated and range of movements were achieved after 4 weeks of treatment.

A single case report shows that *Murivenna Taila Parisheka* with rehabilitation exercise having potential to treat post fracture stiffness.

LIMITATION OF THE STUDY:

This is only single case report on effect of *Murivenna Taila* in post fracture stiffness for accurate standardization of drug result on post fracture stiffness need large number of studies in future.

STRENGTH OF THE STUDY:

As patient was young aged post fracture stiffness was relieved within short period of time.

CONSENT OF PATIENT:

Informed written consent of the patient was taken for procedure and publication of the images without disclosing the identity of a patient.

ACKNOWLEDGEMENT:

Prof. Dr. Anup Thakar, Director, ITRA, Jamnagar

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CONFLICT OF INTEREST: Author declares that there is no conflict of interest.

GUARANTOR: Corresponding author is guarantor of this article and its contents.

SOURCE OF SUPPORT: None

HOW TO CITE THIS ARTICLE:

Koriya H, Dudhamal TS. Management of Post Fracture Stiffness by *Murivenna Taila Parisheka* with Rehabilitation exercise-A Case Report. Int. J. AYUSH CaRe. 2022; 6(3):285-288.