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Ayurvedic Management of *Marmabhighataja Shotha*- A Case Report.

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ABSTRACT

Shotha (~Swelling), a very common manifestation perhaps every individual comes across once or more in their lifetime, can be chronic and distressing sometimes. Present case study describes the Ayurvedic management of traumatic injury induced swelling in the ankle joints for twelve years. Patient did not have sustainable relief in swelling or pain with contemporary medicines. Considering the causative factors and *Marma Sthana* (vital body part) of swelling, patient was treated with *Parisheka* (therapeutic streaming) with *Dashmoola Kwatha* (~Decoction) over bilateral ankle joints for seven days, followed by *Erandamooladi Niruha Basti* (~therapeutic enema) and *Dashmoola Taila Anuvasana Basti* (~therapeutic enema with medicated oil) in *Kala Krama* (~a pattern of *Basti* administration) and *Shamana* (~Palliative) treatment. After completion of treatment the patient had complete remission of swelling and improvement in range of motion of affected joints. The challenging chronic case of local swelling due to traumatic injury, not responding to the allopathic treatment, treated effectively with Ayurvedic interventions considering the causative factors and site of swelling (*Marmasthangata Shotha*) is the uniqueness of this case report. In cases of *Abhighataja* (~Traumatic) pathology, *Marma Shareera* should always be kept in mind while planning the treatment.

Keywords: *Abhighataja Shotha; Erandamooladi Niruha Basti; Marma Shareera; Panchakarma; Parisheka.*

INTRODUCTION

Shotha (~Swelling), finds reference as a *Lakshana* (characteristic) of various diseases as well as a separate disease entity in classics. The importance of this clinical condition can be understood by the fact that *Chikitsa* (treatment) for *Shvayathu* is separately dictated in most of the Ayurvedic classics. *Utsedha* (Swelling) is the cardinal sign of *Shvayathu, Shotha* or *Shopha*. Depending upon the causative factors, *Shotha* can be categorized into *Nija* (Endogenous) or *Agantuja* (exogenous). In *Agantuja Shotha*, *Dosha Prakopa* (provocation of regulatory factors of the body) follows *Abhighata* (Trauma or injury). The treatment depends on the causative factors and the region of *Shotha*. *Marma Shareera* is an important concept in Ayurveda for management of diseases. Trauma to these *Marma* may either result in instant death, death in the long run, or may result in various clinical presentations. There are a group of *Marma* in the foot region. *Kshipra Marma* (first inter digital web space of upper and lower limbs), *Talahridya Marma* (situated at center of foot in

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line with the middle digit of the foot), *Koorcha Marma* (brush shaped tendons of palm or soles), *Gulpha Marma* (at ankle joint), *Koorchashira* (retinacula of ankle region). Moreover, the right knee joint where the patient suffered another injury is also a *Marma* (*Janu Marma*). Among them, *Gulpha* and *Koorchashira Marma* are *Rujakara Marma* (pain causing points) and trauma to these *Marma* results in various types of pain.[1] *Koorcha* and *Janu Marma* (at knee joint) are *Vaikalyakara Marma* (disability causing points), and trauma or injury nearby them results in pain and cause sufferings in the long run.

CASE REPORT

A 30-years-old male presented with a 12-year history of bilateral ankle joints pain and swelling. He suffered injury to the left foot (anterior sole of foot) with a nail piercing his foot up to almost half inches, followed by sudden onset of pain and swelling in his left ankle joint. He received Allopathic treatment for 3-4 months and it provided mild relief in pain but swelling persisted. He discontinued the treatment thereafter. Around 4 years back, he had a trauma to his right knee joint (as per orthopedic doctor, it was a hairline fracture), which resulted in swelling in his right knee joint. Gradually his right ankle joint was also involved. He took allopathic treatment for the same for 4 months, Knee swelling was resolved but failing any relief in ankle joints swelling, he approached Ayurvedic management. Examination revealed the non-pitting nature of oedema (bilateral ankle joints), with no tenderness or warmth over swelling. Skin contour was normal with no lesions or scar. Goniometry exhibited a diminished range of motion in the left ankle joint. He was deputed to a managerial post in a weapon manufacturing unit in the Ministry of Defence. Patient was of *Vatakaphaja Prakriti* (~Somatic Constitution), *Madhyama Samhanana* (~Moderate built) and *Madhyama Satva* (~Moderate psychological disposition). He belonged to *Jangaladesha,* had *Sarvarasa Satmya* (~Habitual to all six tastes) and *Madhyama Aharashakti* (~moderate intake and digestive capacity). Based on traumatic history and site of injury, the patient was diagnosed with *Marmabhighataja Shotha* and managed accordingly.

Investigations and past treatment history

The patient was advised for various investigations by Rheumatologists in the last 12 years. Colour Doppler study of left lower limb revealed normal study (27 Feb 2018). Anti-cyclic citrullinated peptide was 0.83U/ml, Antinuclear Antibody and Rheumatoid Factor were negative (4 June 2019). Mantoux test (7 June 2019) was negative. His Ultrasonography for KUB (7 June 2019) revealed normal study. MRI Scan of Right ankle Joint (7 June 2019) revealed marrow oedema involving lower end of Tibia, Fibula and Talus, mild tenosynovitis, findings were suggestive of pigmented villonodular synovitis. MRI Scan of Left ankle joint was suggestive of Synovitis around the ankle joint. Histopathology report (2 July 2019) revealed Chronic synovitis, with Krenn's chronic synovitis score of 6 (High Grade). Erythrocyte sedimentation rate was 36mm/hr (12 Aug 2019). Total Protein Serum (Biuret method) was 8.35g/dl and Serum creatinine (by Alkaline picrate) was 0.79mg/dl (13 Aug 2019). The patient in last 12 years had been prescribed with combination of drugs like Immunosuppressants (Methotrexate 15mg weekly and Hydroxychloroquine 300mg tab at bedtime), NSAIDS or Non- steroidal anti-inflammatory drugs (Naprosyn 500mg once a day, Etoricoxib 90mg tab at bed time); DMARDS or Disease modifying anti rheumatic drugs (Leflunomide 20mg at bedtime) for more than 3 months. Patient had Corticosteroid injection (Tricort 40 mg) in both ankle Joints on 14 Aug 2019. Pain subsided with these medications but swelling persisted.

Therapeutic intervention

After proper history and examination, patient was treated in Indoor patient department with *Parisheka* over bilateral ankle joints with Lukewarm *Dashmoola Kwatha* (30 minutes daily) for 7 days, followed by 600ml *Erandamooladi Niruha Basti*[2] empty stomach in morning (Table 1) and 60 ml *Dashmoola Taila Anuvasana Basti* after meal in afternoon in *Kala Krama* (Table 2). Concurrent *Shamana* drugs prescribed are mentioned in Table 3. Upon discharge, the same medicines were continued for 15 days. The drugs were procured from an indoor pharmacy of the National Institute of Ayurveda.

For *Parisheka,* 400ml of *Dashmoola Kwatha* was prepared by boiling 100gm *Dashmoola Yavakuta* (~coarse

powder*)* with 1600ml water and reducing it to 1/4th i.e. 400 ml.

Preparation of *Niruha Basti:* Initially 60 ml *Makshika* (Honey) was put in *Khalvayantra* (Mortar pestle). To this, 15 gm *Saindhava* (Rock Salt) was added. The mixture was triturated properly to ensure homogeneity, followed by addition, and mixing of 80 ml *Dashmoola Taila* (~medicated oil) slowly by the side of the mortar and it was continuously stirred until it attained a uniform consistency. *Shatahva* (*Anethum sowa* Kruz) powder was mixed well with water and 20 gm of *Kalka* was added to the prepared mixture, followed by proper grinding with pestle. Then *Erandamooladi Kwatha* (prepared by adding 1600 ml water to 100 gm of *Erandamooladi Yavakuta* (~coarse powder)and reducing it to 400 ml) was poured slowly and mixed. At last 100 ml of *Gomutra* was added to the prepared mixture and properly mixed. The mixture was filtered through a fine sieve and mixed well again with the help of a *Khaja* (churner). Afterwards the mixture was made lukewarm by keeping over a hot water bath.

Table 1. Contents of *Erandamooladi Niruha Basti*

Contents	Dose
Makshika (Honey)	60 ml
Saindhava (Rock Salt)	15 gm
Dashmoola Taila (~Medicated oil)	80 ml
Shatpushpa Kalka (Anethum sowa fine paste)	20 gm
Kwatha- Erandamooladi (Decoction)	400ml
Gomutra (Cow's Urine)	100ml

Table 2. The sequence of *Basti* administration.

Day	**1**	**2**	**3**	4	5	6	7	8	9	10	11	12	13	14	15	16
Basti	A*	A	N#	A	N	A	N	A	N	A	N	A	N	A	A	A

*A- *Dashmoola Anuvasana Basti*, #N- *Erandamooladi Niruha Basti*

Table 3. *Shamana Aushadha*

S. No.	***Shamana Aushadha***	**Dose and frequency**	***Anupana***
1.	*Rasnasaptaka Kwatha* + *Punarnavashtaka Kwatha*	40 ml twice daily orally, empty stomach	Warm Water
2.	*Simhanada Guggulu*	2 *Guggulu* (500 mg each) thrice a day before meal	Warm water
3.	*Shankha Bhasma* 500mg *Ajmodadi Churna* 3gm	Twice a day before meal	Warm water

Assessment Outcomes:

Average retention time for *Niruha Basti* was 5 minutes, and 30 minutes for *Anuvasana Basti*. Pain was assessed on Visual analogue scale and swelling with grading criteria[3] (Table 5). Range of motion was assessed using a half circle goniometer. Patient appreciated mild relief in pain after *Parisheka* but swelling persisted. After the course of *Basti*, pain was completely relieved, swelling subsided, and range of motion at ankle joints was improved. (Table 4, 5)


1


2


3

Figure 1. Left Ankle swelling before Treatment .
Figure 2. Right Ankle swelling before Treatment .
Figure 3. Ankle joints after Treatment.

Table 4. Results

S. No.		Before Treatment (Day 0)	After *Parishek a* (Day 7)	After *Basti* (Day 23)
Pain (VAS*)		8	6	0
Swelling		3	3	1
Range of motion at Ankle Joint	**Dorsiflexion**	5°	10°	20°
	Plantar flexion	10°	15°	40°
*VAS- Visual Analogue Score				

Table 5. Grading Criteria for Ankle Swelling.

Grade	Swelling
0	No Complaints
1	Slightly Obvious
2	Covers well over the bony prominence
3	Much elevated

DISCUSSION

Abhighata due to *Shastra* (~weapons) leads to *Vata Dushti* (Vitiation of *Vata*), which enters the external vessels and further vitiates *Kapha, Pitta* and *Rakta*. They in turn obstruct the path of *Vayu* leading to *Shotha* (*Tairbaddhamargah*). Trauma to *Padapradesha* (foot region) might have resulted in *Dosha* vitiation followed by their accumulation in ankle joints (*Khavaigunya Sthana*- site of injury) causing swelling and pain in bilateral ankle joints. The treatment in such cases should be aimed at clearing off the *Avarana* (~obstruction) and restoring *Vayu* to its abode to subside the *Shotha*.[4] Treatises opine that all kinds of *Shotha* are *Tridoshaja* in nature. *Parisheka* is said to be performed in *Sannipata Dosha* (Conglomeration of *Dosha*). *Parisheka* (with *Dashmoola Kwatha*), a form of *Rukshana Kriya* was planned initially for local treatment of *Shotha* intended for removal of *Avarana*. The drugs of *Dashmoola Gana* (~group of drugs) are *Tridosha Shamaka* (alleviator of vitiated *Tridosha*).[5] *Parisheka* is a kind of *Swedana Karma* which increases the blood flow to the infected area increasing the availability of oxygen, nutrients, antibodies, leukocytes and thereby reduces the inflammation. Heating the skin increases the rate of percutaneous penetration of water-soluble drugs.[6] Thus *Parisheka* with Lukewarm *Dashmoola Kwatha* possessing anti-inflammatory and analgesic properties[7] might have provided mild relief in pain and swelling.

Considering the history of traumatic injury and location of various *Marma* in the foot region, *Basti* was planned. There is no therapy equivalent to *Basti* in protecting *Marma* and alleviating *Vata*. *Erandamooladi Basti* was selected as it alleviates pain in *Pada* (foot) regions and normalizes the *Vata* obstructed due to any cause.[2] The protocol was aimed at management of *Marmabhighataja Shotha*. The Diagnosis as per Rheumatologists was Chronic synovitis. Synovitis is the inflammation of synovial membrane and studies have documented that a therapeutic course of *Basti* modulates immune responses by regulating pro-inflammatory cytokines, immunoglobulins, and functional properties of T-cells.[8] It is interesting to note that the diminution in pain and swelling after *Erandamooladi Basti* match the textbook descriptions of its benefits in *Shoola* and *Shotha*. *Niruha Basti* might have cleared off the obstruction caused to the path of *Vayu,* resulting in diminution in swelling. To avoid *Vata* getting provoked with continuous *Niruha* administration, *Erandamooladi Niruha Basti* was administered alternatively with *Dashmoola Taila* in *Kala Krama*. Concurrent *Shamana Aushadha* were advised to enhance the therapeutic efficacy of procedures in alleviating *Shotha*. *Rasnasaptaka Kashaya*[9] contains

Rasna, *Guduchi, Devadaru, Aragvadha, Goskhura, Punarnava* and *Eranda*. Among them, *Rasna* is reported to have immunosuppressive and anti-inflammatory activity.[10] *Guduchi* (*Tinospora cordifolia* Willd.), possesses anti-inflammatory, anti-arthritic, immunostimulant, diuretic and *Vedanastaphana* properties. *Aragvadha* (*Cassia fistula* Linn.), *Goskhura* (*Tribulus terrestris* Linn.), and *Eranda* (*Ricinus communis*) possess *Shothahara* and *Vedanahara* properties, *Punarnava* (*Boerhaavia diffusa* Linn.) has been depicted as the best *Shothahara* drug and its anti-inflammatory activities have been reported from experimental study.[11] *Punarnavashtaka Kwatha* finds direct indication in *Shotha*.[12] *Simhanada Guggulu*[13] contains *Eranda Taila, Triphala, Guggulu* and *Gandhaka. Guggulu* (*Commiphora wightii*) is *Shothahara* and *Vedanahara*. *Ajmodadi Churna*[14] and *Shankha Bhasma*[15] are *Pachana Dravya* intended at improving digestive capacity. Thus, the *Vedanahara* (~analgesic) , *Shothahara* (~which cures swelling), anti-inflammatory and immunostimulant properties of the *Shamana* drugs might have contributed in reducing pain and swelling and improved range of motion at ankle joints by relieving spasm. Patient was in follow-up for another six months (without any therapeutic intervention), with no recurrence of pain or swelling.

CONCLUSIONS

It can be concluded by the present case, managed successfully with Ayurveda interventions that treatment of oedema should be planned considering the causative factors and site of oedema (*Marmasthanagata Shotha)*.

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