



Traditional Siddha Approach in Treating Frozen Shoulder (Kumbavatham) by Use of Varmam and Thokkanam Therapy- a Case Study

Sindhuja BS, Sankar I, Reddy RM and Shweta T*

Department of Siddha Medicine, Chakrasiddh health centre, India

*Corresponding author: Shweta Tiwari, Department of Siddha Medicine, Chakrasiddh health centre, India, Email: shweta11_in@yahoo.com

Research Article

Volume 8 Issue 2

Received Date: April 29, 2024

Published Date: May 17, 2024

DOI: 10.23880/mjccs-16000364

Abstract

Adhesive Capsulitis or Frozen shoulder also termed as Kumbavatham in Siddha system of medicine, causes swelling and stiffness in particular shoulder capsule restricting its mobility and ROM. The pain intensity is seen to increase in night times with gradual onset of shoulder stiffness and restriction in movement of the shoulder. Conservatively, it can be treated by analgesics, oral steroids, and intra-articular corticosteroid injections. Sometimes, the symptoms persists despite taking conservative measures, initiating patients to opt for alternative therapies for reducing pain and provide flexibility to the joint. A 34-year male from Bangalore presented with severe pain and restricted movements like abduction, adduction, external rotation and flexion of right shoulder both in active and passive movements for last 6 months. The patient was in distressed condition and even small daily tasks were difficult for him. MRI report confirmed of adhesive capsulitis (kumbavatham), one of the vatha diseases mentioned in Siddha system of medicine. A one-month Siddha vaidyam therapeutic approach incorporating Varmam therapy and thokkanam was administered to him. After 25 days, vast improvement in swelling and stiffness with all movements free in Right shoulder with no pain on moving the right arm. The holistic approach of Siddha medicine has provided the reduction in pain measured on VAS and improved restricted movements which was measured using goniometer and SPADI index.

The Siddha system of Medicine is a simple and traditional approach for the treatment of such painful conditions. Conservative management of Adhesive capsulitis through Siddha practices provided significant relief by reducing pain and providing better flexibility in shoulder joints without aid of any analgesics. The paper also gives the details of the method employed and lifestyle modification techniques used to treat the individual.

Keywords: Adhesive Capsulitis; Kumbavatham; Siddha Therapy; Varmam Therapy; Thokannam

Abbreviations: CAM: Complementary Alternative Medicines, ROM: Range of Motion, SPADI: Shoulder Pain and Disability Index.

Introduction

Adhesive Capsulitis or commonly called frozen shoulder is a painful, debilitating musculoskeletal disorder having a disabling capacity [1]. Adhesive Capsulitis is defined by

American Academy Of Orthopedic Surgeons as “a disability in which severity differs, limitations are there in both active and passive movements of shoulder; in which radiographic findings except osteopenia are absent” [2]. It is characterized by fibrosis, causing severe pain and decreased ROM in the shoulders. Frozen shoulder reportedly affects 3–5% of the adult population, commonly people aged 40-60 years are affected more [3] and more common in people with diabetes [4,5]. According to a study, women are more often affected

than men and the chances for non-dominant shoulder to get affected is slightly higher. Trauma or injury to the respective shoulder is thought to be the main cause and few believe it may have an autoimmune component [6]. The aetiology of frozen shoulder is still not clear although arthroscopic and histo-chemical examinations of the involved tissues has shown a fibrous ligament composed of dense Type-III collagen matrix composed of fibroblasts and myofibroblasts causing the loss of elasticity [2].

Frozen shoulder is classically described into three stages: Stage I- the painful stage with gradual onset of pain, Stage II- the frozen stage with decreased ROM, and Stage III- the thawing stage involving painless restriction and progressive improvement of ROM [6]. Though, it is noted that most cases shows decline in pain and resolve over the course of 18-30 months, 18-20% patients have an extended course with ongoing restriction [2]. The diagnostic criteria are shoulder pain for at least one month, inability to lie on the affected shoulder, stiffness and restricted mobility [7]. Pain is usually constant, worse at night, and with cold weather. The course of treatment of frozen shoulder is usually long and debilitating as the condition is painful and disrupts the quality of life [8,9].

The conventional treatment provides relief but the affects are rather short lived. Though there are various treatment options for this condition, there is no decisive treatment established yet. Use of NSAID's, intra-articular steroids eases the painful condition but effects may not be long lasting. To reduce dependency on medicines and their side effects, patients with musculoskeletal disorders have shifted their focus on traditional and complementary medicine like Ayurveda, Homeopathy, Unani and Siddha [10]. These treatment modalities are herbal based and tends to improve immunity and strength. The support by others like physiotherapy, acupressure and yoga have proved helpful in Frozen shoulder in mobility but not much in pain [11].

In Siddha literature, Adhesive capsulitis is termed as Kumbavatham and is explained by increased Vatham in the textbook of Yugi Vaidhya Chindhamani. It is characterized by pain in shoulders and upper limbs with difficulty in abduction and adduction of shoulders, associated with giddiness and heaviness in arms [12]. Siddha therapy is a holistic treatment modality and is found to be very effective in spinal disorders [13]. The manuscripts mentions the initiation of the self-healing capacity of body by use of therapeutic manipulation of varmam points where the pranic energy is concentrated. It also incorporates multi-modal integrative approaches including deep tissue pressure therapy, postural correction, muscular exercises, nutritional and dietary modifications to restore the complete body [14-17]. Siddha system is bestowed with various special therapies such as Pressure

Manipulaiton Therapy (Varmam), Physical Manipulation Therapy (Thokkanam), have proved to be beneficial in pain management and mobility in joints in peri-arthritis [18]. Varmam therapy is a drugless, non-invasive, simple therapy used in pain management by pressing, massaging, tapping & lifting [19]. The therapy time is less and if given regularly it gives long lasting results. Thokkanam is one of the 32 external therapies in Siddha system of medicine. The traditional Siddha Varmam and Thokkanam therapy are congruent to the present-day pressure manipulation therapy and the therapeutic pressure massage/manipulation technique.

This case study reports successful treatment of frozen shoulder (kumbavatham) by incorporating multifacet treatment therapy- Siddha Varmam therapy and Thokkanam therapy, diet and yoga with support from some home exercises; adopting the Guidelines for practice of Siddha Varmam Therapy.

Participant Information

A 34-year left hander male, an IT employee from Bangalore presented in Chakrasiddh OPD in Sept-2023; with severe pain and restricted movements like abduction, adduction, external rotation and flexion of Right shoulder both in active and passive movements for last 2 months. The condition was persistent from last 6 months but severity increased since last 2 months. Pain was constant in nature and use to become worst in night and during cold weather. The patient was in distressed condition as even small daily tasks were difficult for him like wearing shirts and combing his hair. He was frequently disturbed in night due to pain in Rt shoulder and was unable to sleep on that side. This was upsetting his whole day schedule and his irritation level was on high. Office absence was increasing due to low concentration and sleep pattern disturbance.

On visiting his Gen Physician, he advised for x-ray and physical therapy for a month. The x-ray revealed joint space reduction but no fracture or rotator cuff tear. He took physiotherapy and there was improvement in both pain and stiffness for a year but 6 months back the symptoms reappeared, his pain again became his concern. He is unable to hold his Right hand above his shoulder height. Since, he is an IT employee, fast working on laptop is hampered. Due to unsatisfactory result with recent treatment, the patient reported to the Chakrasiddh centre for a cure.

On taking brief history of present illness, there was no trauma or physical injury involved recently but he had a fall from 2-wheeler 3 years back and had sprained his Right shoulder that time but recovered in a week's time. Pain was insidious at start but gradually stiffness lead to restricted shoulder movements. There was no history of D. Mellitus or

any other co-morbidities. The various clinical findings as per 8-fold system of Siddha assessment were recorded at time of start of therapy and post therapy as in Table 2.

Diagnostic Assessments

The pain was assessed by Visual Analogue Scale and the shoulder movements were assessed using goniometer in sitting position.

- SPADI form was used for recording the pain and disability [20]. This form is a self-administered questionnaire that consists of two dimensions, one for pain and the other for functional activities. The pain dimension consists of five questions regarding the severity of an individual's pain. Functional activities are assessed with eight questions designed to measure the degree of difficulty an individual has with various activities of daily living that require upper-extremity use. The pain score in SPADI was found to be 43/50 at the time of initial assessment.

- The shoulder movements were assessed at the time of admission and post therapy on goniometer and were recorded Table 3.

Therapeutic Intervention

The treatment was planned for 25 days with diet modifications and physiotherapy supporting the shoulder movements and flexibility and yoga maruthuvam for 15 mins daily. The therapeutic intervention included hot and cold fermentation after therapy and hot water bath at night before sleep. The special therapies- Pressure Manipulation Therapy (Varmam), Physical Manipulation Therapy (Thokkanam) was subjected daily for 30 minutes at different varmam points to achieve a therapeutic effect in the patient. Pressure (Amarthal) on varmam points was done with fingers and intensity of pressure applied was 2-3 minutes with sitting posture and in prone position. The details of Varmam points and yoga exercises as per mentioned in Siddha treatment guidelines are mentioned in (Table 1).

Special Therapies	Varmam Points	Location of Varmam Points
Varmam Maruthuvam	Enthi kalam	Anterior axillary fold
	Mudichchu	Prominence corresponding to C7 vertebra
	Kaichulukki varmam	laterally on both sides of the spinal column
	Manjadi	at the index finger and thumb; along the upper part of index finger
	Kaikottu varmam	Center of the axilla
	Sooduthari	Four fingerbreadths above the manibandha varmam (radial aspect of the forearm)
	Manibandha varmam	Middle of the wrist joint (ventral aspect)
	Kavuli kaalam	web space (dorsal side) between the thumb and index finger
	Piratharai varmam	near to armpit in posterior side
	Kakkatai kaalam	midway between the neck and head of arms, four fingers above from midline of the clavicle
Thokkanam (Massage Manipulation)	Chippi varmam	Two fingerbreadths downward from the kaichulukki varmam point
	Pidithal	superficial kneading
	Kaikattal	joint flexion
Yoga Maruthuvam	Mallathal	joint stretching
	Pranayamam (Naadi suthi)	5 mins
	Kadi chakkarasanam	3 mins
	Tadasanam	3 mins
	Konasanam	2 mins
	Dhiyanam	2 mins

Table 1: Special therapies for the Frozen shoulder [21].

Diet (Pathiyam)

During the therapy the patient was kept on vegetarian diet. The treatment diet was designed by the Nutritionist adhering to mentioned for vatha diseases in Siddha texts. It was advised to patient for diet free from sour taste, sweet, tubers, and food with cold potency. Idli and rice-based food items were suggested with vegetables. Sprouts, green leafy vegetables, buttermilk was also advised to be taken in daily routine.

Results

The patient showed a good response to the treatment in 25 days. Overall, he felt improvement in all his complaints related to sleep and daily activities. He is able to do exercises and now can wear shirts, comb his hair without pain. The pain score on SPADI was reduced from 43/50 to 25/50. The

disability was reduced from 72/80 to 33/80. The stiffness and range of movements improved and lead to ease in performance of activities which were restricted from long. The vitals and routine blood investigations came to normal. The muscle strength assessment of his right limb improved from 2/5 to 4/5; tenderness decreased on all movements. The patient gained full ROM with respect to extension, internal and external rotation at end of treatment. Even the adduction/abduction and flexion movements showed >70% improvement. The reduction in pain on VAS was measured both at pre and post treatment from 9/10 to no pain at end of treatment and improved restricted movements which was measured using goniometer and SPADI index.

The Clinical Findings and Details of ROM of Shoulder are portrayed in Table 2 and Table 3. SPADI Score for Pain and Disability Index are mentioned in Table 4.

Clinical Parameters	Normal Values	Pre-Treatment	Post-Treatment
Naadi (pulse)		Vatha pitam	Vatha pitam
Sparisam (palpation at rt shoulder)	normal	warm to touch, tender	No tenderness
Naa (tongue examination)	No fissures, taste normal	slightly coated, taste normal	No coating, taste normal
Niram (colour of the body)		Wheatish brown	Wheatish brown
Mozhi (speech)	Normal	Low-pitched	normal
Vizhi (eye examination)	No discoloration	Pale	normal
Malam (stool examination) Bowel habits	Normal	Dark coloured	normal
Moothiram (urine examination) Bladder habits	Normal	Yellow	Straw colour
Other clinical Signs			
BP (in mm Hg)	120/80	128/86	122/78
Pulse Rate	72/min	86/min	84/min
Pallor, icterus, cyanosis	- ve	- ve	- ve
Clubbing, edema	- ve	- ve	- ve
CVS	normal	S1 S2 audible and normal	normal
Chest	Clear	Clear, no added sound	clear
Muscle power	left upper limb	05-May	05-May
	right upper limb	02-May	04-May
	in both lower limbs	05-May	05-May
Muscle tone		Normal	NAD
Muscular atrophy		Not present	NAD
Shoulder joint examination	Left side -	normal	normal
	Right side- Swelling:	Absent	Absent
	Tenderness:	Present	Absent

Lab Investigations			
Radiological	Rt shoulder X-ray	suggest inflammation of capsule and bursa, suggestive of adhesive capsulitis.	Reduced inflammation and increased space between joints
Pathological and biochemical			
Hb%	13.0-16 (in males)	13.6g/dl	13.6g/dl
RBC	4.3billion/cubicmm	4.3billion/cubicmm	4.7billion/cubicmm
TLC	04-Oct	5.6/L	5.8/L
DLC	58%	58%	57%
ESR	<=12mm	19 mm	12 mm
Fasting blood glucose	<100 mg/dl	89 mg/dl	91 mg/dl

Table-2: Clinical Findings (as per 8-fold system of Siddha Assessment) [15].

	Shoulder movements	Pre-treatment	Post-treatment
Restriction ROM: (Active ROM/passive ROM)	adduction/abduction	50/55	100/140
	flexion	55/60	105/150
	extension	35°/35°	FULL
	internal rotation (only with adduction)	35°/40°	FULL
	external rotation (only with adduction)	35°/40°	FULL

Table 3: Measurement of Shoulder Movements on Goniometer before and after Siddha Therapy (Varmam/Thokannam).

	Start of Therapy	After 10 Days	Post-Treatment
VAS (Pain score)	9	4	0
SPADI- Pain	43/50	35/50	25/50
Disability	72/80	51/80	33/80

Table 4: SPADI score before and after therapy.

Discussion

Adhesive Capsulitis or Frozen shoulder also termed as Kumbavatham in Siddha system of medicine, causes swelling and stiffness in articular shoulder capsule restricting its mobility and ROM [18]. It is a condition that is common among adults between 40 to 60 years but can occur in anyone with trauma and accidental cases where the shoulder is harmed like in our case where the patient had an injury in Right shoulder [5]. The pain is worst at night and there is an inability to lie on the affected shoulder; also disrupts the quality of life of an individual [9]. Use of conservative treatment like analgesics, steroids are first line of treatment in such cases but due to expensive drugs and adverse effects of them, the alternative and traditional therapies are preferred by many [8]. Traditional therapies are area specific like in India, therapies like Ayurveda, Unani and Siddha are very popular as they are harmless and have proved to be beneficial in many ailments [21-23].

The patient in this case report was treated on the line of management of vatha diseases as mentioned in Siddha literatures. The subject was classified in Stage II- the frozen stage with decreased ROM [6].

There is a gradual onset of stiffness and pain gets aggravated by the shoulder movements, especially sleeping on the implicated side, and is eased by restricting the use of the extremity [2]. The patient had aggravated vatha humour which was evident from the naadi (pulse) and neikkuri (oil on urine sign) while clinically examining according to 8-fold system of Siddha assessment [15]. To pacify the vitiated vatha, the special siddha therapies- Pressure Manipulaiton Therapy (Varmam), Physical Manipulation Therapy (Thokkanam) were subjected to instigate varmam points to achieve a therapeutic effect in the patient [13]. To lubricate joints and to treat arthritis-related aches and pains, Siddha treatment guidelines promote using heat or cold to the affected joints. Heat relaxes muscles and help relieving muscle and joint

stiffness; Cold can reduce inflammation, swelling, and pain related to arthritis and activity [12,24].

According to Siddha principles, Varmam therapy is the therapeutic manipulation of Varmam points in which the pranic energy remains concentrated and the basic principle is to normalize the flow of Varmam energy which can lead to any pathology [16]. The Varmam therapy is effective in pain management and the Varmam points are stimulated with the fingers and hands, with particular pressures. Studies have proved the positive effect of Varmam treatment in osteoarthritis, per arthritis [18]. The exact mechanism of action is still unexplored but it can be explained by Gate Control Theory by Melzack and Wall which suggests acupressure at definite points transmits impulses to the brain and uninterrupted impulses shut the neural 'GATES' and slower down pain intensity. This improves or strengthens the pain perception threshold of our body [23]. Another therapeutic and pressure massage manipulative therapy, Thokannam, causes various physiological effects which comfort the body as it aids to increase in blood circulation to the affected area. It helps expelling the accumulated toxins deposited in the body parts and also improves the nutrition of the affected body part [24]. It can be understood by process of increased levels of neuro-transmitter serotonin and tryptophan after Thokannam; Thokannam dilutes the toxins and eliminates them via lymphatic drainage [22].

Siddhars and Siddha literatures have proposed the achievements of Yoga. The multi-facet treatment includes incorporation of simple yoga exercises. Yoga practice improves flexibility since this is based on gradual stretching of muscles and connective tissues around bones and joints, improving the existing range of motion [25]. The ROM furnishes compression and lubrication of articular cartilage by the synovial fluid, thereby bringing fresh nutrients and oxygen to those parts of joint cartilage which are rarely used in everyday activities [10].

Pathiyam (Treatment Diet) plays an important role in reducing the inflammation of affected area as per the ancient Siddha textbooks. In this case, the patient was given a vegetarian diet as it helps in fighting the inflammation [19]. Turmeric milk was recommended as it has curcumin that can reduce joint pain and swelling by blocking inflammatory cytokines and enzymes. Vatha inducing foods like tubers, carbohydrates rich food, sour taste food items were avoided as they are believed to reduce the effects of therapy [21].

Conclusion

Siddha, one of the most ancient and traditional therapies are effective in cases like Frozen shoulder with minimum chances of adverse reactions. The restoration of health through these techniques is cost-effective, easy to employ

and most desirable results are received as they enhance body's own mechanism of disrupting pathogenesis. The coalition therapy of Varmam and Thokannam reduced pain and increased the mobility of shoulder joints; measured using goniometer and SPADI index. The clinical findings improved and reduction in SPADI score with the treatment. The dietary modifications and yoga practices; adhering to the Siddha line of treatment contributed to the ease of pain. This therapy has proved beneficial in this single case study and has given strong hope for management of Kumbavatham through non-pharmacological therapies. However, there is a need for large sample size clinical trials to substantiate the results.

References

1. Chetia D (2021) Combined effects of Joint Mobilization with Proprioceptive Neuromuscular Facilitation in Subjects with Adhesive Capsulitis of shoulder. *Ind Am Jr of Pharma Sci* 8(2): 166-171.
2. Bunker TD, Anthony PP (1995) The pathology of frozen shoulder a Dupuytren-like disease. *J Bone Joint Surg Br* 77(5): 677-683.
3. Lundberg BJ (1969) The frozen shoulder Clinical and radiographical observations The effect of manipulation under general anesthesia Structure and glycosaminoglycan content of the joint capsule Local bone metabolism. *Acta Prthopaedica Scandinavica* 119: 1-59.
4. Miller MD, Wirth MA, Rockwood CA (1996) Thawing the frozen shoulder the patient. *Orthopedics* 19(10): 849-853.
5. Kumar A, Suraj Kumar, Aggarwal A, Ratnesh Kumar, Pooja GD (2012) Effectiveness of Maitland Techniques in idiopathic shoulder adhesive capsulitis. *International Scholarly Research Notices*.
6. Inayat F, Ali NS, Shahid H, Younus F (2017) Prevalence and Determinants of Frozen Shoulder in Patients with Diabetes: A Single Center Experience from Pakistan. *Cureus* 9(8): e1544.
7. Reeves B (1975) The natural history of the frozen shoulder syndrome. *Scand J Rheumatol* 4(4): 193-196.
8. Sharad K (2011) A comparative study on the efficacy of end range mobilization techniques in treatment of adhesive capsulitis of Shoulder. *Indian Journal of Physiotherapy and Occupational Therapy* 5(3): 28-31.
9. Connolly J, Regen E, Evans OA (1972) The management of painful stiff shoulder. *Clin Orthop* 84: 97-103.

10. Ernst E, Pittler MH (1999) Experts opinions on complementary alternative therapies for low back pain. *J Manipulative Physiol Ther* 22(2): 87-90.
11. Vas J, Ortega C, Olmo V, Perez FF, Hernandez L, et al. (2008) Single-point acupuncture and physiotherapy for the treatment of painful shoulder a multicentre randomized controlled trial. *Rheumatology* 47(6): 887-893.
12. Kuppuswamy MKN (2004) *Siddha maruthuvam (Podhu)*. 6th (Edn.), Chennai: Department of Indian Medicine and Homoeopathy, pp: 583.
13. Sivaranjani K (2016) Varmam therapy for musculoskeletal disorders. *Eur J Pharm Med Res* 016 3(10): 131e5.
14. Arumugam V, Natarajan S, Muthukumaraswamy S, Ramanathan S, Subramaniam G, et al. (2016) Siddha Medicine An Overview. *International Journal of Pharmaceutical Sciences and Research* 7(2): 542-551.
15. Selvakkumar C, Gayathri R (2020) Siddha Therapy Traditional Practice Challenges and Opportunities for Modernization. *Journal of Ethno pharmacology* 267: 113518.
16. Venkatasubramanian P, Ravisankar B, Anitha R, Senthilkumar A (2015) Siddha Therapy A Review. *Indo American Journal of Pharmaceutical Research* 5(11): 4461-4472.
17. Narayan A, Jagga V (2014) Efficacy of muscle energy technique on functional ability of shoulder in adhesive capsulitis. *Journal of Exercise Science and Physiotherapy* 10(2): 72.
18. Chelvi KSM, Kumar R, Kumar AR. (2016) Effectiveness of varmam therapy in kumbavatham periartthritis shoulder with special reference to restriction of Movements. *Int J Pharma Bio Sci* 7(4): 150-153.
19. Ramaswamy RS (2017) Guidelines for practice of Siddha Varmam therapy. Central Council for Research in Siddha, pp: 62e71.
20. Roach KE, Budiman-Mak E, Songsiridej N, Lertratanakul Y (1991) Development of a shoulder pain and disability index. *Arthritis Care Res* 4(4): 143-149.
21. Goh Cheng S, Dayanan P, Jaspal K (2016) Traditional and Complementary Medicine practice Guideline on Varmam Therapy on Division (T&CMD). Ministry of Health Malaysia (MoH) 14-16.
22. Melzak R, Wall P (1965) Pain mechanism a new theory. *Sciences* 150(971e8): 971-979.
23. Piyush M, Vishwas D, Shivajirao K, Vividha D (2017) Contemporary acupressure therapy adroit cure for painless recovery of therapeutic ailments. *J Trad Comp Med* 7(2): 251-263.
24. Siddique R, Ahmed N (2016) Study of efficacy of Unani Dalak (Massage) in the treatment of osteoarthritis. *Int J Ayush Med Res* 1: 35-40.
25. Broad WJ (2012) *The science of yoga: the risks and the rewards*. New York Simon & Schuster.