A ROLE OF SIDDHA EXTERNAL THERAPEUTIC PROCEDURE IN THE MANAGEMENT OF ADHESIVE CAPSULITIS – A CASE REPORT

V.Ramadass [1*],M.Sneha[2], M.Kannan[3]

[1]PG Scholar, department of Pura Maruthuvam, Government Siddha Medical College, Chennai, Tamil Nadu, India.
[2]PG Scholar, department of Pura Maruthuvam, Government Siddha Medical College, Chennai, Tamil Nadu, India.
[3]Lecturer, Head of the Department, Department of Pura Maruthuvam, Government Siddha Medical College, Chennai, Tamil Nadu, India.

*Correspondence author: ramadassbsms3@gmail.com

Abstract

A 58 year married male from Chennai presented with pain and restricted abduction, adduction, external rotation and flexion of right shoulder both in active and passive movements for 2 months. He was diagnosed to be adhesive capsulitis which is equated to Kumbavatham, one of the vatha diseases mentioned in Siddha system of medicine. He was treated with Siddha external therapeutic procedure, Ottradam with amanakku ilai and thokkanam with ulunthu thylam. After the treatment period of 15 days, the patient was followed for 6 months. There were no adverse reactions/events observed during the course of treatment. The combination therapy has provided the reduction in pain and restricted movements which was measured using goniometer and SPADI index.

Keywords:*Kumbavatham, Ottradam, Thokkanam, SPADI index, Adhesive Capsulitis*

Introduction

Adhesive capsulitis is also known as frozen shoulder or painful stiff shoulder or peri-arthritis often has a prolonged course of treatment for two to three years. It is a condition characterized by functional restriction of both active and passive shoulder motion[1].The diagnostic criteria are shoulder pain for at least one month, inability to lie on the affected shoulder, stiffness and restricted shoulder movements which may cause pronounced sleep disturbances. Frozen shoulder condition is most common in the fifth and sixth decades of life. The peak age is in the mid-50s. Onset before the age of 40 is rare. Women are more often affected than men [2]. The chances for non-dominant shoulder to get affected is slightly higher. This is prevalent in patients with uncontrollable diabetes [3]. Usually, it has a prolonged course of treatment. The conventional treatment available are use of NSAID, intra-articular steroids, physiotherapy, acupressure and yoga [4]. Although pain is relieved by NSAIDs, the recovery from this condition is prolonged. Moreover, NSAIDs may cause side effects. Though there are various treatment options for this condition, there is no decisive treatment established yet. The painful functional deficit in this condition also decreases the quality of life. This condition is analogous to Kumbavatham, one of the types of 80 Vatha diseases mentioned in the textbook Yugi Vaidhya Chindhamani. Kumbavatham is a disease characterized by pain in shoulders and upper limbs with difficulty in abduction and adduction of shoulders, burning sensation in cheeks and eyes, giddiness, fever, pain below the umbilicus, inflammation below the tongue etc. [5], Thokkanam and Ottradam therapy in Siddha system of medicine is found to be effective in musculoskeletal disorders. 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. Herein we report this case study of a patient

diagnosed with kumbavatham and successfully treated with Siddha ottradam therapy and Thokkanam therapy.

Patient Information

A 58 year married male from chennai, who is a working as manager in private sector, presented with pain and restricted abduction, adduction, external rotation and flexion of right shoulder both in active and passive movements for 2 months. he was a non-vegetarian by diet taking chicken, fish very frequently. His sleep was disturbed due to pain, the bladder and bowel habits were normal. he hails from a middle income group family. he was a known diabetic for 10 years with a poor diabetic control. The blood sugar level was 295 mg% in fasting, 354 in postprandial and his HbA1c level was 11.8%. he has a family history of diabetes. he was on tablet: Metformin 500 mg bd 1 tab, t. Glipizide 5 mg: 1 before food (morning) for the past 5 months. History revealed that due to poor diet control and poor drug compliance his blood sugar level was not under control. There was no traumatic history. History revealed pain in right shoulder with restricted abduction and external rotation for 4 months. The x-ray of right shoulder taken 4 months back revealed no fracture or rotator cuff tear. The joint space in right shoulder was reduced. he had undergone physiotherapy for the pain and restricted shoulder movements 2 months back which resulted in reduction of pain and stiffness in right shoulder. But the symptoms reappeared after a week. Due to unsatisfactory result with recent treatment, the patient reported to the pura maruthuvam OPD, government siddha medical college, chennai.

Clinical Finding

The patient complained of difficulty in wearing shirt, combing hair, taking things from shelves above his height, unable to take hand at back. The pain was worse at night and aggravated while lying on right side. The clinical findings like pain score, Range of movements and Siddha assessment envagai thervu-1. Naadi (pulse) 2. Sparisam (palpation) 3. Naa (tongue examination) 4. Niram (colour of the body) 5. Mozhi (speech) 6. Vizhi (eye examination) 7. Malam (stool examination) 8. Moothiram (urine examination) were recorded. The vital signs were normal.

Diagnostic assessment

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 [6]. The pain score in SPADI was found to be 37/50 at the time of initial assessment. The shoulder movements were assessed and were recorded in Table 4. The assessments were done weekly once.Clinical examination revealed no weakness of muscles around the shoulder and upper limbs. The naadi was found to be vatha pitham and the neikkuri pattern (Oil in urine sign) was “aravena neendathu” ie, snake pattern. With the above symptoms he was diagnosed to be affected by Kumbavatham (Adhesive capsulitis) with predominant vatha humour.

Informed consent

Written informed consent was obtained from the patient. The patient has given his consent for his images and other clinical information to be reported in the journal. The patient understand that name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed

Therapeutic intervention

1. Therapeutic purgation

To normalize the vitiated vatha humour, therapeutic purgation was started. Meganatha Kuligai 130 mg (1 tablet) was chosen for therapeutic purgation[7]. The pill was powdered, mixed with hot water and was given to the patient at 5 am in a single dose on 12.7.2021. Hot water was administered every 15 min. The purgation started at 5.45 am. The patient had nausea and passed loose stools 5 times since morning. The purgation subsided in the afternoon. he was given a glass of butter milk. The diet he took on the day of purgation was a cup of curd rice in the afternoon and 4 idlies (rice cakes) for dinner. On the day of purgation therapy, no blood investigations or therapy was done. From the next day, blood investigations and the assessment of pain, shoulder movements with the aid of goniometer and SPADI scoring was done.

2. Ottradam and Thokkanam therapy

The treatment package of amanakku ilai ottradam and thokkanam with Ulunthu thylam was started. Ulunthu thylam is used for alleviating pain in vatha diseases[8]. The ingredients of Ulunthu thylam is depicted in Table 1. The treatment for kumbavatham was done with amanakku ilai ottradam and Thokkanam therapy was done daily morning at 8 am in empty stomach. The details of the Aamanakku ilai Ottradam[9] are shown in Table 2. Duration of treatment session: 15 min; Posture: Sitting; Time of treatment: Half an hour after a meal or in empty stomach; Technique: Pressing (Amarthal); 10 sec gap between each manipulation. The patient was advised to take bath in hot water after the treatment.

TABLE 1: Tamil name, botanical name and quantity of ingredients used in the preparation of Ulunthu Thylam.

Tamil name	Botanical name	Quantity
Ulunthu	*Vigna mungo*	1 padi
Gingelly oil	*Sesamum indicum*	1 padi (1.3 L)
Goat milk	*Goat milk*	1 Padi (1.3 L)
Sukku	*Zingiber officinale*	4.2 gm
Inthuppu	*Rock salt*	4.2 gm
Milagu	*Piper nigrum*	4.2 gm
Arisi thippili	*Piper longum*	4.2 gm
Poonaikali vithai	*Mucuna prurita*	4.2 gm
Sathaguppai	*Anethum calamus*	4.2 gm
Vasambu	*Acorus calamus*	4.2 gm
Athimathuram	*Glycyrrhiza glabra*	4.2 gm
Vetpalai pattai	*Wrightia tinctoria*	4.2 gm
Perarathai	*Alphinia galanga*	4.2 gm

Preparation of Ulunthu Thylam

Ulunthu decoction was made and then one padi of gingelly oil, one padi of goat milk was added into decoction. Sukku, inthuppu, milagu, arisi thippili, poonaikali vithai, sathaguppai, vasambu, athimathuram, vetpalai pattai, perarathai – each one varagan (4.2 gm), all the ingredients was powdered and made in the form of karkam by using goat milk. The karkam ws added into the decoction and boiled till it attained required consistency of thylam.

This thylam is indicated for Vatha diseases as pidi thylam.

TABLE 2

Tamil name, botanical name and quantity of ingredients used in the preparation of Aamanakku Ilai Ottradam

Tamil name	Botanical name	Quantity
Aamanakku ilai	*Ricinus communis*	Quantity sufficient
Aamanakku ennai	*Ricinus communis* (Castor oil)	Quantity sufficient

Preparation of Aamanakku Ilai Ottradam

The leaves of aamanakku (ricinus communis) is fried with castor oil and made into a pouch like kizhi,then fomented in the affected area.

3. Concomitant medication

Madhumega chooranam capule - 2, twice daily with hot water was prescribed for diabetic control in addition to modern medicine. It was advised to take capsule madhumega chooranam 1 h after having the allopathy antidiabetic drugs.

4. Pathiyam (Diet)

The pathiyam (treatment diet) mentioned for vatha diseases was adhered during the treatment period. The diet free from sweet, sour taste, tubers, food with cold potency were avoided. Idli and primarily rice-based food prepared with vegetables, curry leaves, mint leaves etc, were provided. Moreover sprouts, green leafy vegetables, butter milk and milk were also served during the treatment period.

Follow up and outcome

After the treatment of 15 days, the intensity of the pain was reduced. The pain scoring in SPADI score was reduced from 37/50 to 22/50. The disability was reduced from 66/80 to 38/80. The range of movements improved well allowing him to perform his daily activities with ease. The vitals and routine blood investigations were normal. The blood sugar values on fasting and postprandial after the treatment period were 190 mg/dl and 270 mg/dl respectively. The timeline of the clinical findings and details of range of motion of shoulder are portrayed in Table 3 and

TABLE 3:Clinical Findings

Name	Day 1	Day 7	Day 14	Day 20
Pain score	8	6	3	2
Spadi index				
Pain	37/50	30/50	22/50	19/50
Diability	66/80	52/80	38/80	32/80
Blood sugar (fasting) in mg/dl	295	230	190	147
Blood sugar (post prandial) in mg/dl	354	310	270	209
Siddha assessments				
Naadi (pulse)	Vathapitham	Vathapitham	vathapitham	vathapitham

Sparism (palpation)	Tenderness and warmth in the affected area	No tenderness and warmth	No tenderness and warmth	No tenderness and warmth
Naa (tongue examination)	Coated, no fissures, taste perception normal	Coated, no fissures, taste perception normal	Coated, no fissures, taste perception normal	Coated, no fissures, taste perception normal
Niram (colour of the body)	Black	Black	Black	Black
Mozhi (speech)	Normal pitched	Normal pitched	Normal pitched	Normal pitched
Vizhi (eye examination)	No discoloration, flow of tear – normal	No discoloration, flow of tear - normal	No discoloration, flow of tear - normal	No discoloration, flow of tear – normal
Malam (stool examination)	Yellow in colour	Yellow in colour	Yellow in colour	Yellow in colour
Neerkuri (urine examination)	Pale yellow	Yellow	Pale yellow	Pale yellow
Neikuri (oil on urine sign)	Fast spread – snake pattern		Steady spread – snake pattern	Steady spread – snake pattern

TABLE 4:Measurement of Shoulder Movement with Goniometer and SPADI Score Before and After the Treatment Period

Shoulder movement measured using goniometer	Before treatment	After treatment
Abduction (right)	30^o	90^o
Abduction (left)	120^o	150^o
Forward flexion (right)	50^o	120^o
Forward flexion (left)	170^o	180^o
Extension (right)	25^o	50^o
Extension (left)	60^o	60^o
External rotation (right)	30^o	80^o
External rotation (left)	90^o	90^o
SPADI score	79.2%	46.15%

The patient was closely followed and observed for 6 months and he had no aggravation of symptoms. There were no adverse reactions/events observed during the course of treatment. He was instructed to follow the pathiya (diet) advised.

Discussion

Use ofNSAIDs are the mainstay of treatment for pain. The range of motion of affected joints are in general improved with physiotherapy and exercises. Due to the panic of side effects and the expensive treatment, patients are marching towards traditional medicine. Here the patient was treated on the line of management of vatha diseases mentioned in Siddha literatures. The vatha humour was aggravated in the patient which was evident from the naadi (pulse) and neikkuri (oil on urine sign). To pacify the vitiated vatha, purgation was given and consequently the Ottradam and Thokkanam therapy was started [10]. This case being a diabetic with poor control posed a challenge as frozen shoulder has strong

relationship with diabetes mellitus [13,14]. Though the patient was under treatment for diabetes mellitus with modern medicine, Siddha medication capsule madhumega chooranam was administered,

concomitantly observing diet restrictions. The Ottradam therapy is effective in pain management. Previously the effect of ottradam therapy in osteoarthritis, periarthritis were reported. The exact mechanism of action is still unexplored. The mechanism of action of massage technique (Thokkanam) was already established. There are 9 types of Thokkanam described in Siddha system of medicine and appropriate techniques are adopted according to the disease condition [11]. In Siddha perspective, the ingredients of Ulunthu thylam have anti vatha properties to alleviate pain. Also, most of the ingredients possess analgesic, anti-inflammatory properties which are shown in Table 3. Hypothetically after Thokkanam, the level of amino acid tryptophan increases which in turn increases the production of neurotransmitter serotonin. Thokkanam helps to dilute the toxins and expels them via lymphatic drainage [12]. The patient was advised to avoid tubers, sour taste.

Conclusion

The combination therapy of ottradam and Thokkanam has provided the reduction in pain and restricted movements which was measured using goniometer and SPADI index. There is reduction in SPADI score with the treatment package. The treatment is effective as there are minimal chances for adverse reactions. The strict adherence to the Siddha line of treatment and diet also have contributed to the ease of pain. The findings in this single case study have given strong hope for management of Kumbavatham through non-pharmacological therapies. However randomized controlled clinical trials with large sample size are warranted to substantiate the results.

Reference

1. Zuckerman JD, Rokito A. Frozen shoulder: a consensus definition. J Shoulder Elbow Surg 2011;20:322e5.
2. Connolly J, Regen E, Evans OA. The management of painful stiff shoulder. Clin Orthop 1972;84:97e103.
3. Balci Nilu fer, Kemal Balci Mustafa, Tuzu ne Serdar. Shoulder adhesive capsulitis and shoulder range of motion in type II diabetes mellitus: association with diabetic complications. J Diabet Complicat 1999;13:135e40.
4. Vas J, Ortega C, Olmo V, Perez-Fernandez F, Hernandez L, Medina I, et al. Single-point acupuncture and physiotherapy for the treatment of painful shoulder: a multicentre randomized controlled trial. Rheumatology 2008;47: 887e93.
5. Kuppuswamy Mudhaliyar KN, editor. Siddha maruthuvam (Podhu). 6th ed. Chennai: Department of Indian Medicine and Homoeopathy; 2004. p. 583.
6. Williams Jr JW, Holleman Jr DR, Simel DL. Measuring shoulder function with the shoulder pain and disability index. J Rheumatol 1995;22(4):727e32.
7. Kuppuswamy Mudhaliyar KN, editor. Siddha vaidhya Thirattu. 1st ed. Chennai: Department of Indian Medicine and Homoeopathy; 1998. p. 39e40.
8. Impcops, siddha marunthugalin seimurai,17th edition.india maruthuvargal kootaravu marundhu seinilayam mattrum pandagasaalai,2018.p.318.
9. Ka.sa Murugesa mudhaliyar,Gunapadam part 1 Mooligai,2th ed. Chennai : Department of Indian Medicine and Homoeopathy; 1951. p. 72,73.
10. Amirthalingam Pillai TS, editor. Agathiyar nayana vidhi. 1st ed., vol. 9. Tamilnadu Siddha Medicinal Board, Directorate of Indian System of Medicine; 1976. Chennai.

11. Uthamarayan KS, editor. Siddhar Aruvai maruthuvam. 2nd ed. Tamilnadu stationery printing industrialists; 1967. p. 23e5.
12. Moyer CA, Seefeldt L, Mann ES, Jackley LM. Does massage therapy reduce cortisol? A comprehensive quantitative review. J Bodyw Mov Ther 2011;15: 3e14