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Case Report

Effectiveness of Thokkanam Therapy (Siddha Physical Manipulation Technique) in the management of Kumbavatham (Periarthritis of Shoulder joint)- A Case Report

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Abstract

Periarthritis shoulder, though it is a common musculoskeletal condition, its management remains a huge challenge. In Siddha system of medicine, this condition is referred to as *Kumbavatham*. It is one among the 80 types of *Vatha* diseases, caused due to vitiated *Vatha* humour. *Thokkanam* is a type of external therapy modality, in which physical manipulation procedures are done by hands of the physician on the body of the patient with or without application of medicated oil. *Thokkanam* as a standalone treatment modality is not yet subjected to scientific evaluation. Hence this study reports the successful management of a 61-year-old male patient. He reported with complaints of pain and restricted movements in the right shoulder joint for the past one year to *Puramaruthuvam* department of Ayothidoss Pandithar hospital (APH)- National Institute Siddha (NIS). He was diagnosed with *Kumbavatham* and the treatment was started. *Thokkanam with Kunthriga thailam* was carried out for 14 days. Following the treatment, pain and restriction of movements subsided. The prognosis was assessed using VAS score, goniometric measurements of range of movements and Shoulder pain and disability index (SPADI) score. VAS score improved from 10 points to 2 points, SPADI score improved from 96.76% to 6.9% and goniometric measurement improved from restricted movements to normal range of movements following treatment. These findings may encourage the use of *Thokkanam* therapy with *Kunthriga thailam* in the management of *Kumbavatham.*

Keywords: Siddha, *Kumbavatham*, *Thokkanam*, *Kunthriga thailam*, Periarthritis shoulder

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Introduction

Periarthritis shoulder is an inflammatory disorder, typified by shoulder pain, stiffness, and a notable reduction in passive range of motion. In the general population, the prevalence of this condition ranges from 2% to 5%. Usually, the age at which onset occurs is 55. The proportion of females is slightly higher (1.4:1) than males (1). These patients may experience an abrupt onset of symptoms followed by a gradual healing period that may last two to three years. Though some researches shows that this condition is a self-limiting ailment that goes away in one to three years, other reports state that 20% to 50% of patients may experience symptoms for up to ten years which severely affects the patient's quality of life. Though its aetiology is still unknown, the pathophysiology is mostly considered to be a degenerative process of synovial inflammation followed by capsular fibrosis(2). This condition has three stages namely the freezing stage characterised by progressive pain, followed by the phase of progressive stiffness, which exhibits restriction in range of movements of the shoulder joint, initially with the external rotation and progressing to lateral abduction. The final stage is the stage of resolution or thawing phase (3). The primary impairment associated with this disorder is functional impairments, which make it difficult for the patient to go about their daily lives and maintain personal hygiene, clothes, and hair. Neck pain is another typical complication of frozen shoulder, primarily caused by overusing the cervical muscles to compensate for the loss of shoulder motion (4). The treatment options include medications such as NSAID's, Opioids, etc., injections of local steroids, physical therapy, hydrodistension and surgical procedures such as manipulation under anaesthesia, arthroscopic capsular release and open capsular release. Researches shows that both the conservative and surgical treatment modalities offer equal results in one to three years, however, it is at the expense of pain, stiffness and functional disabilities. Literatures shows that, there are various treatment modalities in the alternative system of medicines such as the Chinese traditional medicines, cupping therapy, yoga, massage therapy etc., which may offer better outcome than the available standard conservative and surgical treatment options (5).

Siddha system of medicine, is an indigenous medical system practiced in the southern parts of Indian subcontinent. This system has coded over 4448 different types of ailments (6). *Kumbavatham* is a one among the 80 types of *Vatha Noigal* (diseases caused due to vitiated Vatha humour), coded by Siddhar Yugi in his treatise *Yugi Vaithiya Chindamani*. It can be correlated

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to Periarthritis shoulder in the modern medicine(7). Siddhar *Yugi* describes *Kumbavatham* as a musculoskeletal condition characterised by boring pain in the shoulders and upper limbs with difficulty in abduction and adduction of the affected shoulder, burning sensation in cheeks and eyes, giddiness and fever (8). Furthermore, Siddha system offers treatment to various conditions, through 32 types of internal medications and 32 types of external medicines and therapies(9). *Thokkanam* (Siddha Physical manipulation technique) is type of specialised external treatment modality used in the treatment of *Vatha Noigal*. These treatment modalities were explained in detail by the Siddhar *Theraiyar* in the classical literature *Theran Tharu* (10). *Thokkanam*, a word framed by combining two words *Thokku* and *Anam*. *Thokku* means skin, *Anam* means support or tones or heat. It is a physical manipulation procedure usually done by hands of the physician on the body of the patient in nine different methods, with or without application of medicated oil. The 9 types of *Thokkanum* techniques are *Thattal*, *Irukkal*, *Pidithal*, *Murukkal*, *Kaikattal*, *Amarthal*, *Izhuthal*, *Malathuthal* and *Asaithal*. To give an overview of these 9 types of *Thokkanam*, *Thattal* is the tapping technique, *Irukkal* is the tightening or squeezing or deep kneading technique, *Pidithal* is the grasping or pulling up technique, *Murukkal* is the twisting or wringing technique, *Kaikattal* is the flexion technique, *Azhuthal* is the pressing or pressuring or compressing technique, *Izhuthal* is the traction technique or kneading technique, *Malathuthal* is the supination or extension technique and *Asaithal* is the shaking technique. The text *Theraiyar Tharu* also codes that this physical manipulation technique can be done in 3 types of intensities namely, *Mandam* (Mild intensity). *Mathimam* (Moderate intensity) and *Sandam* (Severe intensity). This can be correlated to the pressure given during the manipulation technique. In *Mandam*, the pressure is exerted superficially onto the skin and adipose tissue, in *Mathimam* the pressure is exerted upto the fascia and superficial muscle layers and in *Sandam* the pressure is exerted upto the deep muscles and in some cases up to the bones(11). Though few case studies have been published using this treatment procedure, this study stands unique as it explains in detail the *Thokkanam* procedures used and is the first study to document the usage of selected *Thokkanam* types among the 9 types. Furthermore, it is the first study to document the usage of *Kunthriga Thailam* as an adjuvant during the *Thokkanam* procedure in the management of *Kumbavatham*. Hence, this case study is written in accordance with the CARE guidelines, to report the effectiveness of selected types of *Thokkanam with Kunthriga Thailam* in reducing the clinical signs and symptoms of Periarthritis shoulder.

Patient Information

A 61 years old married male, from Chengalpattu, reported to the Puramaruthuvam outpatient department, Ayothidoss Pandithar Hospital (APH) - National Institute of Siddha (NIS), with complaints of pain in the right shoulder joint, arm and neck, difficulties in usage of right upper limb, difficulty in doing day to day activities such as raising right upper limb, combing hair, buttoning the shirt etc., for the past one year on 23.10.2024. Patient reported that his sleep was disturbed due to pain, his appetite, bowel and bladder habits were normal. History revealed that he had no comorbidities, there were no previous history of trauma and there was no history of previous surgeries. His personal history revealed that he was non vegetarian in diet, labour at a nearby press company, with heavy workloads for the past 30 years. Additionally, the patient also reported that he had underwent conservative treatment in the nearby clinic for the past 3 months, as the condition did not show any improvement, he was referred to an Orthopaedic surgeon for surgical interventions, as the patient was not willing for surgical procedures, he visited APH-NIS for management.

Clinical Findings

The patient was clinically examined, on inspection no deformities were seen. Palpation illustrated tenderness over the anterior and superior aspect of right shoulder joint. On examining movements, restricted range of movements were present in abduction, adduction, flexion, internal rotation, external rotation and circumduction. The measurement did not illustrate any muscle wasting in the arm. On examination based on Siddha principles, the Nadi of the patient was *Vathapitham*. On examining *Mukutram* (3 vital humors), in *Vatham Viyanan* and *Samanan*, In *Pitham Sathagapitham* and in *Kabam Santhigam* were affected.

Diagnostic assessment

Routine blood and urine investigation were done, the results were within the normal limits which are listed in Table 1. X ray of the right shoulder joint in the Anteroposterior and lateral view turned out to be a normal study. *Enavagai thervu* (Siddha Eight-fold examination) was used for diagnosis of the condition as per Siddha principles which are listed down in Table 2. The range of movements of Right shoulder joint at base line are listed in Table 3. Based on the patient's history, clinical examination and diagnostic investigation, the patient was diagnosed with Periarthritis of right shoulder joint. Prognosis was measured using Visual Analog Scale (VAS) to document the prognosis of pain, Goniometric measurement to document the Range of movements (ROM) and Shoulder Pain and Disability Index (SPADI). SPADI is a self-administered questionnaire that was designed to evaluate the degree of shoulder pain and discomfort in performing activities of daily living by the patients themselves, without clinician components. This was developed by a panel of rheumatologists and physical therapists and was published in 1991 and is considered as gold standard for documenting prognosis of pain and disability of shoulder. It has 13 items, with 5 items for pain and 8 items for disability (12). At baseline before treatment, patient had VAS score of 10 and the SPADI score of 96.76% indicating extremely severe shoulder pain and disability.

Table 1: Routine Blood and Urine Investigations

Haematology		**Clinical Biochemistry**	
Hb mg/dl	13.8	**Glycaemic indices**	
Total WBC cells/cu.mm	5300	Blood Sugar (mg/dl) Fasting	93.9
Differential Count		Blood Sugar (mg/dl) PP	123
Neutrophiles	48	**Renal Function test**	
Lymphocytes	37	Blood Urea (mg/dl)	26.6
Esinophiles	7	Serum creatinine (mg/dl)	0.99
Monocytes	8	**Liver Function test**	
PCV/HCT %	40.2	Serum bilirubin total (mg/dl)	0.41
MCV fl	87	Serum bilirubin Direct (mg/dl)	0.21
MCH pg	29.9	Serum bilirubin Indirect (mg/dl)	0.20
MCHC g/dl	34.4	AST (IU/L)	14.7
Platelet 10^3/uL	2.4	ALT (IU/L)	13.9
ESR 30 mins	6	Alkaline Phosphatase (IU/L)	59
Urine Examination		Protein Total (gms/dl)	6.32
Albumin	Nil	Globulin (gms/dl)	2.5
Sugar Fasting	Nil	Albumin (gms/dl)	3.82
Sugar PP	Nil		
Deposits	3-5 Pus cells 2-4 Epi cells		
Urobilinogen	Normal		

Table 2: Siddha parameters of examination based on *Envagai thervu* (Siddha Eight-Fold System of Clinical Assessment) at the time of reporting to OPD (23.10.2024)

Parameters	Observation
Naadi (pulse)	*Vatha Pitham*
Sparisam (palpation)	Severe tenderness over anterior and superior aspect of right shoulder joint
Naa (tongue examination)	Coated with no fissures and normal taste perception
Niram (colour of the body)	Normal
Vizhi (eye examination)	Normal
Mozhi (speech)	Normal Pitched
Malam (stool examination)	Normal
Moothiram (urine examination)	Normal

Table 3: ROM of right shoulder joints at the time of reporting to OPD (23.10.2024)

ROM	Goniometric measurements (degrees)
Abduction	60°
Adduction	30°
Forward flextion	80°
Extension	10°
Internal rotation	45°
External rotation	15°

Therapeutic interventions

During the first visit (23.07.2023), patient was examined and given internal medications for 7 days. As the pain and disability did not reduce on his next visit on 30.07.2023, the patient was admitted to the *Puramaruthuvam* Inpatient department (IPD), APH-NIS and treated. The treatment protocol consisted of *Thokkanam* therapy daily for 30 – 45 minutes till the pain and functional disability reduced completely.

Internal and External Medications

The internal and external medication administered to the patient was procured from IMPCOPS ltd (GMP certified company). The list of internal medication given are listed in Table 4.

Table 4: List of Internal medications

S. No	Name of the Medicine	Dosage	Adjuvant
1	Tablet *Amukura Chooranum*	2 TDS	Milk
2	Tablet *Silasathu Parpam*	2BD	Warm Water
3	Capsule. *Rasagandhi Mezhugu*	2 BD	Palm Jaggery

Kunthriga thailam, was used as the external medication for application over the affected area twice a day. The composition and preparation of *Kunthriga Thailam* is listed in Table 5.

Table 5: Composition and Preparation of *Kunthriga Thailam*

S. No	Tamil Name	Botanical Name	Quantity
1	*Poonaikann Kunthrigam*	Hard resin of *Pistacia lentiscus* Linn	100 grams
2	*Nalennai*	*Sesamum indicum* Linn	1000 grams
The oil is heated, mixed with powdered *Poonaikann Kunthrigam*, stirred till it dissolves completely in the oil, cooled and stored.			

***Thokkanam* Therapy**

Pre-treatment procedure

The treatment procedure was explained and the informed consent was obtained from the patient. The patient was advised to take only liquid diet and avoid solid diet, an hour before the procedure. Then patient was advised to surge natural urges. Vitals were monitored and patient was positioned to start the treatment.

Position of the Patient: Sitting

Position of the physician: Standing on the affected side

Duration of Treatment: 30 - 45 minutes

Medicated oil used: *Kunthriga Thailam*

Treatment Procedure:

The different types of *Thokkanam* with its manipulation technique are listed down in Table 6.

Table 6: The types of *Thokkanam* and its Manipulation technique

Steps	Type of *Thokkanam*	Intensity of Pressure	Position of Upper limb	Manipulation Technique	No of Strokes
1	*Ennai Theithal* (Application of oil)	*Mandam* (Mild)	On the sides of the body	Oil is taken in the palms of the physician, and applied gently over the right shoulder joint, anterior chest wall, scapular region, arms, forearm and hands of the patient	1-2 strokes
2	*Thadaval* (Superficial Stroking)	*Mandam* (Mild)	On the sides of the body	Gentle stroking using hands of physician in which hands were gently slided over the shoulder joint, anterior chest wall, scapula region, right arms, forearms and hands	3- 5 times
2	Murukkal (Finger Pad Kneading)	*Mathimam* (moderate)	On the sides of the body	The strokes are applied with the finger pads of first 3 fingers gliding from the mastoid process to the anterior chest wall	3- 5 times
3			On the sides of the body	Similar strokes were given from the curve of neck to the superior aspect of the shoulder joint and upper arms	3- 5 times
4			On the sides of the body	Similar strokes were given from the occipital prominence to the shoulder blades	3- 5 times
5			On the sides of the body	The medical border of the hand is glided with moderate pressure along the anterior chest wall from the mastoid process	3- 5 times

6			On the sides of the body	Similar strokes were given from the curve of neck to the superior border of the shoulder	3- 5 times
7			On the sides of the body	Similar strokes are given from the occiput region to the inferior border of scapula	3- 5 times
8	*Azhuthal* (Pressure)	*Mathimam* (Moderate)	On the sides of the body	The hand of the physician is kept as English alphabet C, so that the tip of the thumb is in the anterior border of shoulder joint and index finger is in the posterior border of the shoulder joint. Then a mild pressure is given and released	1-2 times
9	*Murukkal* (Palmar kneading)	*Mandam* (Mild)	On the sides of the body	Rotation strokes are given with the palmar aspect of the hands, starting from the anterior aspect of shoulder joint to the superior, then ending in the posterior aspect of shoulder joint.	3-5 times
10	*Thadaval* (Superficial strolling)	*Mandam* (Mild)	The shoulder was held in 30-60 of flexion	The whole hand is glided from the medial aspect of the wrist, then to the medial aspect of the forearm, arm, around the shoulder joint, lateral aspect of the arm, elbow, forearm and terminates at the lateral aspect of the wrist.	3-5 times
11	*Izhuthal* (Pulling)	*Mathimam* (Moderate)	The shoulder was held in 30-60 of flexion	The hand of the physician was kept as a c shape and downward strokes were given from the upper part of the arm to the elbow	3-5 times
12			The shoulder was held in 30-60 of flexion	Similar strokes were given from the elbow to the wrist	3-5 times
13	*Murukkal* (Palmar kneading)	*Mandam* (Mild)	On the sides of the body	One hand of the physician was placed on the front of` the shoulder and another hand on the back of shoulder. Then the hands of the physician were rotated in clockwise and anticlockwise directions	3-5 times
114	*Thadaval* (Stroking)	*Mandam* (Mild)	The shoulder was kept in 180^{o} of flexion or to the maximum degree of flexion	Gentle gliding strokes was given using alternate hands of physician from the sides of the last rib to the mid of axilla along the mid axillary line	3-5 times
15	*Murukkal* (Thumb pad kneading)	*Matimam* (Moderate)	Relaxed on the sides of the body	Kneading was done with the pulp of the thumb along the medial and inferior aspect of the scapula	3-5 times
16	*Azhuthal* (Pressing)	*Mathimam* (Moderate)	The shoulder was kept in 30-60 of flextion	The web space between the thumb and index finger was pressed with the tip of the first three fingers of the physician	1-2 times
17	*Asaithal* (Shaking)	*Mathimam* (Moderate)	The shoulder was kept in 30-60 of flexion	The hand of the physician was interlocked with the hands of the patient and slight low intensity shaking movement was given	5-7 times
18	*Thadaval* (Stroking)	*Mantham* (Mild)	In relaxed position, kept on the sides of the body	Gentle strokes with the hands of the physician gliding from the neck to the tip of fingers, then around the shoulder joint and scapular region	2-3 times
19	*Thadaval* (Stroking)	*Mantham* (Mild)	In relaxed position, kept on the sides of the body	One hand of the physician was gently glided down from the occipital region to L5 vertebra	1time
20	*Thadaval* (Stroking)	*Mantham* (Mild)	Relaxed and kept on the sides of the body	One hand of the physician was gently glided from the base of neck to the xiphoid process in the midline of the body	1time

Post treatment procedure

Patient was advised to lie in the cot for 10-15 minutes, vitals were monitored. Advised to take bath in luke warm water after 30 minutes of completion of treatment.

6. Follow up and Outcome (Results)

At initial assessment on 23.07.2023 the VAS score was 10, pain score using SPADI was 100%, functional disability score was 96.76%, ROM measured using goniometer showed that abduction

was 60˚, forward flexion was 80˚, extension was 10˚, external rotation was 15˚ indicating extremely severe pain and disability. Following internal and external medication for 7 days, on the next assessment on 30.07.2023 the VAS score, SPADI score and ROM movements remained the same. So, patient was admitted in the *Puramaruthuvam* IPD, APH-NIS and started the *Thokkanam* procedure. After one week of *Thokkanam*, the patient was assessed on 06.08.2023, VAS score improved to 6, pain dimension of SPADI improved to 40%, functional disability of SPADI improved to 27.5%, abduction improved to 100˚, flexion improved to 120˚, extension improved to 30º, external rotation improved to 30˚ and the overall SPADI score was 34% indicating moderate shoulder pain and disability. So, the *Thokkanam* procedure for continued for another 7 days. Following this, on 13.08.2023 the VAS Score became 2, pain dimension of SPADI improved to 10%, functional disability of SPADI improved to 6.9%, on assessing the range of movements abduction improved to 175˚, external rotation improved to 45˚, flexion improved to 175˚, extension improved to 45˚, external rotation improved to 45˚ and the overall SPADI score improved to 6.9% indicating mild pain and disability. As the pain, functional disability reduced and ROM improved following two weeks of treatment, patient was discharged and followed up for next 6 months. The timeline of the clinical findings, VAS score, SPADI score, goniometric measurements and *Envagai thervu* are listed in Table 7. ROM before treatment is shown in Figure 1. and Figure 2. The ROM after treatment is shown in Figure 3 and Figure 4.

Figure 1. Abduction of right shoulder joint before treatment	**Figure 2: External rotation of right shoulder joint before treatment**	**Figure 3: Abduction of right shoulder joint after treatment**	**Figure 4: External of rotation of right shoulder joint after treatment**
			

Table 7: Timeline of the clinical findings, VAS score, SPADI score, goniometric measurements and *Envagai thervu*

Parameters	**DAY 1 (23.7.2023)**	**Day 7 (30.7.2023)**	**Day 14 (6.8.2023)**	**Day 21 (13.8.2023)**	**After 6 months (13.02.2024)**
Tenderness	Severe	Severe	Moderate	Mild	No
VAS	10	10	6	2	0
Pain score of SPADI	100%	100%	40%	10%	0
Functional disability score of SPADI	96.76%	96.76%	27.5%	5%	0
Total SPADI	96.76%	96.76%	34%	6.9%	0
Interpretation of SPADI score	Extremely severe pain and disability	Extremely severe pain and disability	Moderate pain and disability	Mild pain and disability	No pain and disability
Goniometric measurements (degrees)					
Abduction	60º	60º	100º	175º	180º
Adduction	30º	30º	45º	45º	45º
Forward flextion	80º	80º	120º	175º	180º
Extension	10º	10º	30º	45º	45º
Internal rotation	45º	45º	55º	55º	55º
External rotation	15º	15º	30º	45º	45º
Envagai Thervu (Siddha Eight-fold Examination)					
Naadi (pulse)	*Vatha Pitham*	*Vatha pitham*	*Vatha pitham*	*Vatha pitham*	*Vatha pitham*
Sparisam (palpation)	Severe tenderness	Severe tenderness	Moderate tenderness	Mild tenderness	No tenderness
Naa (tongue examination)	Normal	Normal	Normal	Normal	Normal
Niram (colour of the body)	Normal	Normal	Normal	Normal	Normal
Vizhi (eye examination)	Normal	Normal	Normal	Normal	Normal
Mozhi (speech)	Normal Pitched	Normal Pitched	Normal Pitched	Normal Pitched	Normal Pitched
Malam (stool examination)	Normal	Normal	Normal	Normal	Normal
Moothiram (urine examination)	Normal	Normal	Normal	Normal	Normal

Discussion

Frozen shoulder being one of the most common musculoskeletal conditions, its management yet remains difficult for the orthopaedic surgeons. Though it is a self-limiting condition, the resulting pain and functional disability greatly affects the quality of life of the patients (13). The first line of treatment for Frozen shoulder, include the non-surgical interventions such as Physical therapy, NSAIDs and injection therapy (corticosteroid injection nor hydro dilatation). Recently, arthroscopic capsular release has become a popular minimally invasive procedure. Though these interventions may have therapeutic effects, success rate is low and adverse events often persists (14). Owing to these limitations, there is a growing interest in the alternative system of medicine. In this case the patient was effectively treated with *Thokkanam* using *Kunthriga thailam*. Following *Thokkanam* consecutively for 14 days the patient improved from extremely severe pain and disability to mild pain and disability condition. The quality of life also improved drastically and the patient was highly satisfied with the treatment modality. Among the 9 types of *Thokkanam*, *Thadaval*, *Izhuthal*, *Murukkal*, *Azhuthal* and *Asaithal* were used. The text *Padartha Guna Chindamani* codes that *Thokkanam* causes beneficial effects on skin, muscles and the circulatory system. It overall improves the body wellbeing and sleep (10). The therapeutic effectiveness of this treatment procedure is attributed to the changes in the fluid mechanics, neuromuscular responses, connective tissue responses and psychological effects. Though *Thadaval* is not listed in the 9 types of *Thokkanam*, it is a preparatory technique. It aids in getting the patient used to touch, allows the assessment of the state of skin and tissues to be treated and improves sensory analgesia. *Murukkal* aids in improving circulation and cellular exchange, improves excitability and elasticity of the muscles and tendons and helps in maintaining vitality of connective tissues. *Azhuthal* reduces tissue adhesion improves flexibility and reduces pain. *Izhuthal* improves circulation, facilitates cellular exchanges, reduces stress and depression. *Asaithal* helps in strengthening the muscle fibres, joints and reduces scar tissues (15). *Kunthriga thailam* was used as an adjuvant topical application while performing this manipulation technique. This is a medicated oil composed of *Poonai kann Kunthrigam* (Hard resin of *Pistacia lentiscus* Linn) and *Nallennai* (Seed oil of *Sesamum indicum* Linn). Previous studies have reported anti-inflammatory, anti-arthritic, analgesic and anti-nociceptive properties of *Nallennai* (Seed oil of *Sesamum indicum*) (16). Anti-inflammatory and antipruritic properties of topical application of *Poonaikann Kunthrigam* (Hard resin of *Pistacia lentiscus*) were also elaborated in previous studies (17). Promising results were seen in this case by treating through Siddha physical manipulation technique *Thokkanam*. The physiological effect of the *Thokkanam* and the pharmacological action of *Kunthriga thailam* may have attributed to the therapeutic efficacy of his treatment modality. Previous studies have established the therapeutic effectiveness of Siddha medicine, in the management of periarthritis shoulder. In a study with 10 patients diagnosed with *Kumbavatham*, Mirunaleni et al. (2018) reported that two months of Varmam therapy combined with internal medications produced statistically significant improvements in both subjective and objective parameters, with highly significant reductions in pain and disability scores ($p < 0.05$) (18). Another study reported that treatment of *Kumbavatham* with Siddha Varmam and Thokkanam therapy for 15 days resulted in significant pain reduction, with SPADI pain scores decreasing from 37/50 to 22/50 and disability scores from 66/80 to 38/80 (19). In a case study by Utrapathi et al. (2023) showed that following internal medicine and *Ottradam* therapy, for 15 days, the SPADI pain score improved from 36/50 to 24/50 and the disability score from 61/80 to 41/80, indicating significant clinical improvement (20). These previous studies included adjuvant treatments. However,hese studies have not documented the type of *Thokkanam* application and manipulation technique. This is the first study to document the *Thokkanam* procedure as a stand-alone treatment modality in the management of periarthritis shoulder. In addition, this study has also clearly documented the type of *thokkanam* used and its manipulation techniques.

Conclusion

The results of this case study have raised significant hopes in the management of *Kumbavatham* (Periarthritis shoulder) through *Thokkanam*. It is advantageous than the conservative treatment modalities due to less adverse effects and it is cost effective. These results cannot be generalised but will act as evidences for carrying out further clinical trials in this field.

Patient perspectives

The patient self-reported that he was highly satisfied with the treatment. His quality of life was improved. He was very much impressed about the treatment modalities received at APH-NIS.

Informed consent

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

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