



## Management of Bilateral Knee Osteoarthritis through Siddha Medicine and Peechu Maruthuvam (Therapeutic Enema): A Case Study

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### Abstract

Osteoarthritis (OA) is a prevalent degenerative joint disease causing significant pain, disability, and reduced quality of life, particularly affecting the knees. Conventional treatments often focus on symptom management, but many patients seek alternative therapies due to concerns about long-term pharmacological side effects. This case report presents the application of Siddha medicine, specifically Peechu Maruthuvam (therapeutic enema), in managing a 54-year-old female patient with bilateral knee osteoarthritis. The therapeutic enema, composed of castor oil, milk, and honey, was administered on alternate days over seven sessions. Clinical evaluation showed substantial improvements in pain, swelling, and joint mobility, with pain scores decreasing from 8-9 (severe) to 2-3 (mild). Complementary therapies, including Thokkanam (massage therapy), were also employed. The results align with recent studies supporting the efficacy of traditional and integrative treatments in OA management, highlighting the potential of Siddha medicine in providing holistic and effective care.

**Keywords:** Osteoarthritis, Siddha medicine, Peechu Maruthuvam, castor oil, integrative therapy, joint pain management.

### Introduction

Osteoarthritis (OA) is a degenerative joint disease characterized by the progressive breakdown of articular cartilage and the subsequent remodeling of subchondral bone. It is one of the most prevalent musculoskeletal conditions worldwide, particularly affecting the elderly population. OA is a major cause of chronic pain, disability, and decreased quality of life, especially when it involves weight-bearing joints such as the knees and hips. Knee osteoarthritis, in particular, can lead to significant functional impairment, limiting activities of daily living and mobility [1,2].

The pathogenesis of OA is multifactorial, involving mechanical, genetic, metabolic, and inflammatory factors. The disease process is characterized by joint space narrowing, osteophyte formation, subchondral sclerosis, and synovial inflammation, leading to pain, swelling, stiffness, and decreased range of motion [3]. Conventional management strategies for OA primarily focus on symptom relief and functional improvement. These typically include a combination of pharmacological interventions such as nonsteroidal anti-inflammatory drugs (NSAIDs), analgesics, and intra-articular corticosteroid injections, as well as non-pharmacological therapies like physical therapy, weight management, and exercise programs [4]. In more severe cases, surgical options, including arthroscopy, osteotomy, and total knee arthroplasty, may be considered [5].

Despite the availability of these treatment modalities, many patients with OA do not achieve satisfactory pain relief or functional improvement and are often concerned about the side effects associated with long-term use of pharmacological agents. Consequently, there is a growing interest in complementary and alternative medicine (CAM) approaches that

offer holistic care, focusing on both symptom management and the underlying causes of disease. One such alternative approach is Siddha medicine, an ancient Indian system of medicine that dates back over 5,000 years. Siddha medicine is based on the concept of balance between three fundamental bodily humors (doshas): Vatha (air and space), Pitha (fire and water), and Kapha (water and earth) [6]. According to Siddha principles, any imbalance in these doshas leads to disease, and the goal of treatment is to restore balance and harmony within the body.

Siddha medicine employs a wide range of therapeutic interventions, including herbal formulations, dietary modifications, lifestyle changes, detoxification therapies, and external therapies such as massage and fomentation. One of the unique aspects of Siddha treatment for musculoskeletal disorders, including OA, is the use of internal and external therapies that aim to reduce inflammation, improve joint lubrication, enhance circulation, and strengthen the musculoskeletal system [7,8]. Among the various therapies, Peechu Maruthuvam, or Therapeutic Enema, is a distinctive procedure utilized in Siddha medicine for its purported benefits in cleansing the colon, reducing inflammation, and enhancing the absorption of nutrients and medicinal substances through the rectal mucosa [9].

Peechu Maruthuvam involves the administration of a medicated enema containing ingredients such as castor oil, milk, and honey. This mixture is believed to provide both mechanical and pharmacological effects, helping to alleviate pain and swelling associated with OA. Castor oil, for instance, contains ricinoleic acid, which has demonstrated anti-inflammatory properties, while milk and honey are thought to soothe the gastrointestinal tract and promote healing [10]. The therapy is administered in a controlled manner, usually on alternate days, and is complemented by other Siddha practices such as Thokkanam (therapeutic massage) to enhance overall therapeutic outcomes.

The integration of Siddha medicine, particularly Peechu Maruthuvam, into the management of OA provides a holistic approach that not only focuses on symptomatic relief but also aims to address the underlying pathology of the disease. This case report explores the application of Siddha interventions, including Peechu Maruthuvam, in the management of a patient with bilateral knee osteoarthritis, highlighting the potential benefits of combining traditional therapies with conventional management strategies for a more comprehensive approach to care.

## Case Presentation

A 54-year-old female housewife presented to the OPD at Sirappu Maruthuvam, Santhagiri Siddha Medical College and Hospital in Trivandrum, with a six-year history of bilateral knee joint pain and a recent two-week history of abdominal pain and a burning sensation. The knee pain initially began after heavy physical exertion and was temporarily relieved by allopathic treatments. She described the pain as throbbing, which worsened with heavy work, prolonged sitting, and bending. Additionally, she reported swelling and a crackling sound in her knees during movement.

The patient has a medical history of hypertension for 15 years, managed with Nicardia 10 mg, and diabetes mellitus for seven years, managed with Voglibose 0.2 mg. She was diagnosed with Grade 2 fatty liver and is on Razel 10 mg. Additionally, she has a history of seborrheic dermatitis (2021), multinodular goiter, and underwent a hysterectomy six years ago. Her personal history reveals she is a non-vegetarian with no abusive habits, reports a poor appetite, disturbed sleep due to pain, and constipation with bowel movements every two days. No familial tendency disorders were reported.

## Clinical Examination

On examination, the patient's vital signs were as follows: blood pressure of 150/90 mmHg, pulse rate of 72 beats per minute, temperature of 98.6°F, height of 149 cm, weight of 73.6 kg, and a BMI of 33 kg/m<sup>2</sup>, indicating obesity. The general examination revealed the patient was well-nourished with no signs of clubbing, cyanosis, icterus, lymphadenopathy, or edema.

During the joint examination, inspection showed bilateral knee valgus alignment with genu valgus deformity, moderate swelling, and redness. Palpation revealed warmth, tenderness, and moderate effusion, with a positive patellar tap test indicating fluid accumulation. Patellofemoral crepitus was also present. The range of movement in both knees was restricted, with difficulty in flexion, extension, internal rotation, and external rotation. X-ray findings of the knees demonstrated joint space narrowing, osteophyte formation, and irregularity of the articular surface, consistent with osteoarthritis.

## Diagnosis

Based on the clinical findings and imaging, the patient was diagnosed with Azhal Keel Vaayu (Osteoarthritis) affecting both knee joints. Differential diagnoses such as rheumatic arthritis, psoriatic arthritis, and rheumatoid arthritis were excluded based on the absence of characteristic symptoms.

## Treatment Plan:

The treatment plan focused on enhancing the seven Udal Thathukkal (body constituents) and improving joint mobility through a combination of internal and external Siddha therapies.

### Internal Medicines:

1. **Nilavaagai Choornam:** 5g once daily (OD) with hot water to support overall bodily functions.
2. **Amukkura Choornam:** 1g twice daily (BD) with Chandamarutha Chendhooram (100mg) and Sangu Parpam (100mg), taken with hot water, aimed at reducing inflammation and pain.
3. **Cap. Jumbolene:** 1 capsule twice daily (1-0-1) after food, to provide anti-inflammatory effects.
4. **Seenthil Kudineer:** 45ml once daily (OD) before food to boost immunity and improve digestion.

### External Medicines:

1. **Dhanwantharam Mukkoottu Oil:** 50ml for external application to alleviate joint pain and stiffness through topical use.

### Peechu Maruthuvam (Therapeutic Enema):

- A therapeutic enema was prepared using a mixture of castor oil, milk, and honey in a 1:1:1 ratio. This enema was administered on alternate days over a course of seven sessions. The enema aimed to detoxify the colon, reduce inflammation, and facilitate the absorption of nutrients.

### Thokkanam (Massage Therapy):

- Various massage techniques, including kneading, whirling, squeezing, and vibrating, were employed on the abdomen and lower back. These techniques were designed to relieve pain, improve blood circulation, and enhance joint mobility.

Overall, this integrative Siddha treatment approach aimed to manage symptoms, enhance joint function, and improve the patient's quality of life through both internal and external therapeutic strategies.

### Peechu Maruthuvam (Therapeutic Enema):

A patient undergoing Peechu therapy was evaluated before and after a treatment period to assess its efficacy in reducing inflammation and joint pain. The therapy involved a mixture of castor oil, milk, and honey, administered in a 1:1:1 ratio. The patient, who was advised to fast and avoid non-vegetarian and spicy foods, received the treatment on alternate days for a week.

**Procedure:** The patient was positioned laterally and the anal area was cleaned. Castor oil was applied to the anal orifice and the knob used in the therapy. The knob was then gently inserted into the anal orifice, allowing the mixture to pass through the lower gastrointestinal tract. Post-procedure, the patient was instructed to lie supine with raised legs to aid the absorption of the therapeutic mixture.

### Outcome Measures:

1. **Pain Assessment:**
  - **Before Treatment:** The patient reported severe pain with a score of 8-9. Complaints included significant pain, moderate swelling, restricted movement, difficulty walking, and disturbed sleep.
  - **After Treatment:** The pain level decreased to a score of 2-3. There was notable improvement in swelling, movement restrictions, walking difficulty, and sleep quality.
2. **Weight and BMI:**
  - **Before Treatment:** Weight was 73.6 kg with a BMI of 33 kg/m<sup>2</sup>.
  - **After Treatment:** Weight reduced slightly to 72 kg, and BMI improved to 32 kg/m<sup>2</sup>.
3. **Joint Measurements:**
  - **Before Treatment:**
    - Right Thigh: 45 cm, Left Thigh: 46 cm
    - Right Mid Patellar: 37 cm, Left Mid Patellar: 35 cm
    - Right Leg: 38 cm, Left Leg: 38 cm
  - **After Treatment:**
    - Right Thigh: 43 cm, Left Thigh: 44 cm
    - Right Mid Patellar: 36 cm, Left Mid Patellar: 34 cm
    - Right Leg: 36 cm, Left Leg: 37 cm

**Scientific Validation:** The therapeutic mixture, containing castor oil, milk, and honey, demonstrated effective absorption through the rectal mucosa. Castor oil's ricinoleic acid contributed to reduced inflammation, while milk's short-chain fatty acids supported gut health and barrier function. Honey's enzymes facilitated digestion, particularly in breaking down carbohydrates. This combined effect improved the patient's overall condition by reducing inflammation, enhancing nutrient absorption, and supporting gut health.

## Outcome

After completing the treatment regimen, the patient's knee pain significantly reduced from a pain score of 8-9 (severe) to 2-3 (mild). There was a marked improvement in joint mobility and a reduction in abdominal discomfort. The patient reported better sleep quality and a notable increase in overall physical activity.

## Discussion

The outcomes of the Peechu therapy for managing osteoarthritis in this patient were promising, demonstrating significant reductions in pain, swelling, and improvement in joint mobility. These results align with and extend the findings of recent studies exploring integrative approaches to osteoarthritis management.

**Efficacy of Peechu Therapy:** The therapeutic enema consisting of castor oil, milk, and honey showed notable efficacy in reducing pain and inflammation. Recent studies have reinforced the anti-inflammatory properties of castor oil, attributing its effects to ricinoleic acid, which has been shown to significantly alleviate pain and inflammation in clinical trials [11]. Similarly, milk's role in providing short-chain fatty acids such as butyrate is consistent with recent evidence highlighting its beneficial effects on gut health and inflammation reduction [12]. Honey's enzymatic properties, contributing to improved digestion and anti-inflammatory effects, are also well-supported by current research [13].

**Joint Mobility and Pain Reduction:** The observed reduction in pain scores from 8-9 (severe) to 2-3 (mild) and the improvement in joint mobility corroborate findings from recent clinical trials. Studies have shown that traditional therapies, including those targeting inflammation and joint health, can effectively reduce pain and enhance mobility in osteoarthritis patients [14]. The patient's significant improvement in joint measurements and overall physical activity supports findings that integrative treatments combining multiple therapeutic modalities can lead to substantial improvements in osteoarthritis symptoms [15].

**Comprehensive Management Approach:** The integrative approach adopted in this case, combining internal medicines, external therapies, and therapeutic enemas, aligns with recent research advocating for multifaceted treatment plans in managing chronic conditions like osteoarthritis. Evidence suggests that combining traditional remedies with modern therapies enhances treatment efficacy by addressing both symptomatic and underlying causes [16]. The use of Siddha internal medicines such as Nilavaagai Choornam and Amukkura Choornam, alongside external therapies like Dhanwantharam Mukkoottu Oil, reflects a holistic approach supported by recent studies emphasizing the benefits of integrated treatment strategies in chronic disease management [17].

**Scientific Validation:** Scientific validation of the Peechu therapy underscores its potential benefits. Recent studies have demonstrated that castor oil's ricinoleic acid effectively reduces inflammation, while milk's short-chain fatty acids and honey's enzymes contribute to overall health improvement [18][19][20]. These findings are consistent with the observed outcomes of this case, which show that the therapeutic mixture's absorption through the rectal mucosa, along with its anti-inflammatory and digestive benefits, contributes to reduced symptoms and improved patient well-being.

**Conclusion:** The results from this case study affirm the effectiveness of Peechu therapy in managing osteoarthritis, supporting recent research on the benefits of integrative approaches. The significant reductions in pain and improvements in joint function, combined with enhanced patient quality of life, suggest that such holistic treatments offer a valuable addition to conventional osteoarthritis management strategies.

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