Case Report

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Holistic Management of Chronic Low Back Pain and ACL Tear Using Chakrasiddh Spine Expert Therapy (CSET): A Case Report

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Abstract

This case report highlights the integrative management of chronic low back pain and a partial right anterior cruciate ligament (ACL) tear in a 42-year-old male medical professional by practicing Chakrasiddh Spine Expert Therapy (CSET), a Siddha-based therapeutic approach. The patient had been symptomatic for three years despite manifesting multiple conventional and alternative interventions. Following a 30-day course of CSET, which included manual therapy (varmam and Thokkanam), energy healing sessions, mild rehabilitative exercises, and Siddha dietary modifications, the positive outcome was accomplished. The patient was subjected to inhouse questionnaire pre and post treatment to identify the difference in various symptoms and other functional and outcome measures (VAS, KOOS, TUG) for the clinical assessment. The result suggested of patient experiencing significant symptomatic and functional improvement, including pain reduction, restored mobility, and improved sleep enhancing her quality of life.

This case suggests that Siddha-based interventions such as CSET may serve as effective complementary and a potential non-surgical modality for ACL tear which were traditionally managed surgically or pharmacologically.

Keywords: ACL tear, Siddha medicine, Chakrasiddh Spine Expert Therapy (CSET), integrative therapy

Introduction

Anterior cruciate ligament (ACL) tears are among the most common and debilitating musculoskeletal injuries, particularly affecting the athletes and active people [1]. With an incidence rate of approximately 81.2 per 100,000 person per year, the ACL injuries are especially prevalent among adolescents and young adults [11]. In long term, these ACL injuries can cause chronic low back pain and are dominant causes of chronic knee instability, joint degeneration, disability, often affecting quality of life and physical functions in individuals [6,10]. The biomechanical complexity of the ACL, coupled with its limited vascularity and intra-particular location, often hinders spontaneous healing, necessitating intervention in form of physical therapy or surgery [2,12]. If left untreated, ACL injuries can lead to further damage of joint, and ultimately accelerating the progression of early osteoarthritis and lumbar degeneration underscoring preserving the ACL remnant following injury to enhance future neurosensory function and improve clinical outcomes [1,17]. Many studies have justified the co-occurrence of knee pain and lower back pain as patients presenting with either condition should be assessed for the other, as simultaneous management may lead to better outcomes [5].

Standard management in ACL typically involves surgical reconstruction followed by an extensive rehabilitation protocol, yet a considerable proportion of individuals fail to return to their pre-injury activity levels, with many experiencing persistent pain, reduced range of motion, and compromised quality of life despite surgical intervention, highlighting the need for comprehensive and individualized treatment approaches [3,8]. Furthermore, the economic burden associated with ACL injuries is substantial, encompassing surgical costs, rehabilitation expenses, and lost productivity, thereby emphasizing the importance of effective prevention and treatment strategies

[19]. Additionally, psychological barriers such as fear of re-injury and anxiety significantly affect recovery trajectories [18]. While surgical and physiotherapeutic interventions remain the mainstream, there is growing interest in complementary therapies that offer non-invasive, holistic, and patient-centred alternative and integrative treatment strategies [11].

Siddha medicine, a traditional South Indian system of healing system, offers a potential complementary solution to knees and lower back region by addressing the root cause of issue, emphasizing balancing the body's elemental forces and promoting health through dietary, manual therapies such as varmam and thokkanam, and energetic therapies [4,7]. The siddhars believed the root causes are the painful myofascial trigger points, also called blockages/physical knots; often related to stress, trauma, or emotional issues. These are released by practitioners by feeling, pressing, and clearing them using energy medicine so that the Prana or energy within body flows unobstructed. Various effective remedies for ligament injuries, particularly through Varmam therapy and external pressure techniques are mentioned in siddha manuscripts [13,14]. In Varma Maruthuvam literature, knee joint injuries (Mootu Kayangal) include a condition Muzhangal Mootu Savvu Kayangal, which is characterized by pain, joint swelling, and restricted flexion and extension, closely aligning with the clinical presentation of anterior cruciate ligament (ACL) injuries [9].

Siddha Therapy and CSET

Chakrasiddh Spine Expert Therapy (CSET), developed by Chakrasiddh, is an integrative Siddha-based treatment protocol that combines manual therapy, energy realignment, personalized yoga practices, and tailored dietary interventions. The implementation of targeted regimens aimed at restoring spinal alignment, improving neuromuscular control can enhance joint stability and mitigate the risk of injury [33]. The foundation of CSET lies in enhancing the body's natural healing through correcting biomechanical imbalances, particularly those originating from the spine, and relieving pressure on peripheral joints such as the knee and lumbar. Varmam therapy, central to CSET, involves the precise stimulation of vital energy points where life force (pranic energy) is believed to concentrate. By activating these points using defined methods, CSET aims to restore the flow of blocked energy, thereby promoting healing at the affected area and facilitating recovery. The integration of dietary modifications and targeted exercises represents a promising avenue for promoting tissue repair and strengthening the musculature surrounding the knee joints. This comprehensive approach is customized to meet individual patient needs and emphasizes the psychological dimensions of musculoskeletal injuries, aiming to optimize recovery outcomes and support a successful return to daily activities and physical function.

CSET has demonstrated promising results in neurological and musculoskeletal conditions, and this study seeks to evaluate its therapeutic efficacy specifically in the management of ACL tears. This report presents a case of successful non-surgical management of chronic low back pain and ACL tear using CSET focusing on its effectiveness, applicability, and cost-effectiveness.

Case Representation

A 42-year-old male medical professional from Hyderabad, India, presented to Chakrasiddh Holistic Healing Centre OPD with chronic musculoskeletal complaints. The patient reported persistent Right knee instability and pain in lower back region for the past three years, progressively worsening despite multiple allopathic and alternative therapeutic interventions. On taking a past medical history, the patient reported an accident during a football match that he had five years back, after which he started having intermittent pain in Right knee. At the time of injury, the patient experienced a distinct popping sensation in the right knee, followed by immediate pain and an inability to bear weight on the affected limb. Within 30 minutes, noticeable swelling developed around the knee joint. The patient sought medical attention from an orthopaedic specialist and was advised to take rest for a week.

Despite initial conservative management, the patient continued to experience intermittent pain and swelling, particularly after prolonged standing, walking, or exertion involving the knee. These symptoms impaired his daily activities and functional capacity; with the condition worsening day by day. Based on clinical suspicion, the orthopaedic consultant recommended an MRI of the right knee, which confirmed a partial ACL tear. Subsequently, the patient was advised to undergo surgical intervention, which he deferred in favour of exploring alternative therapies and so visited Chakrasiddh.

Assessment Tools and Outcome Measures

On clinically examining the patient, following were noted by centre's physiotherapist: There was an audible crepitus in the right knee and radiating pain extending from the knee to the ankle, knee joint instability with crepitus on passive movement and weight-bearing activities, postural imbalance with noticeable instability during ambulation, marked stiffness and tightness in the lumbar and calf musculature along with poor sleep quality due to pain and discomfort. A thorough clinical evaluation of the right knee was conducted pre and post therapy, comprising inspection, palpation, range of motion assessment, and special tests, with the findings summarized below in Table 1:

Inspection Findings	Parameter	Observation (pre-therapy)	Observation (posttherapy)
	Swelling	Present (++)	Resolved
	Wound/Contusion	Absent	-
Palpation Findings	Local Temperature	Increased (++)	Normal
	Tenderness	Grade 1 at medial ligament	Absent
Range of Motion (ROM)	Flexion	Terminal 30° limitation	Full, no limitation
	Extension	Terminal 20° limitation	Full, no limitation
Special Tests	Patellar Tap Test	Positive	Negative
	Valgus Stress Test	Negative	Negative
	Varus Stress Test	Negative	Negative
	Anterior Drawer Test	Positive	Negative
	Posterior Drawer Test	Negative	Negative
	Lachman Test	Positive	Negative
	Squat Test	Negative	Negative

Table 1: Clinical evaluation of Right knee

The presence of joint swelling, warmth, and Grade 1 medial tenderness suggests acute intra-articular involvement. Limitation in both flexion and extension with pain on movement supports functional compromise of the knee. Positive findings in the Lachman and Anterior Drawer tests are highly suggestive of anterior cruciate ligament insufficiency, consistent with a partial ACL tear confirmed via MRI. The absence of valgus/varus instability and negative posterior drawer test indicates no major collateral or posterior cruciate involvement.

The other functional and outcome measures that were used pre- and post-intervention: Pain intensity by VAS [34]. Functional mobility by TUG (Timed Up and Go) test [16]. KOOS (Knee Injury and Osteoarthritis Outcome score) for Knee function, Muscle strength through Isometric Quadriceps Strength Test and sleep quality by Pittsburgh Sleep Quality Index (PSQI) [10,15].

Therapeutic Intervention (CSET Protocol)

The patient underwent a structured 30-day CSET program at Chakrasiddh Holistic Healing Centre and a follow-up x-ray and MRI after 6 months to see recovery. The protocol included:

1. Manual Therapy:

A 40-minutes Varmam/Marma Therapy and Thokkanam therapy was administered to the patient. Therapeutic actions of Varmam relates to stimulation of specific vital points to stimulate energy flow (Pranic regulation) through knee joint and relieves pain, swelling, and neuromuscular tension and Thokkanam is deep tissue and rhythmic massage to relieve stiffness and enhance circulation. Both therapies support ligament regeneration and promotes joint stability. Various Varmam points [24] were stimulated for managing ACL tear and lower back area, particularly targeting knee pain, joint instability, and muscular imbalance: **(Table-2)**

Varmam Points	Location	Purpose/effect
Kundil Varmam	Behind the knee, in the popliteal fossa	Improves circulation to the knee joint and supports ligament repair
Thirumuthugal Varmam	Just below the medial malleolus (inner ankle)	Relieves referred knee pain and reduces imbalance in lower limbs
Ottam Varmam	Medial to the patella on the femur	Helps in realigning knee joint, improves stability
Thirumoolam Varmam	Lumbar region (around L4–L5)	Corrects spinal alignment influencing lower limb coordination
Kaal Vellai Varmam	Calf muscle junction	Reduces calf muscle stiffness and improves lower limb function
Mudichu Varmam	Base of the neck (cervical-thoracic junction)	Balances nervous input and relieves chronic pain patterning
Muladhara Varmam	Coccyx or perineum area	Influences pelvic alignment and supports lower limb energetics

Table-2: Varmam Points for ACL Tear Management

2. Therapeutic Energy Correction Sessions:

Special two energy sessions for the patient were included in the therapy package performed at second and fourth week. Generally, these traditional Siddha diagnostic and energy balancing techniques are practitioner-led sessions using biofield modulation. In this case, the practitioner sensed energetic blockages near the knee and spine of his past traumatic memories [16]. Circular motion and tapping helped in releasing energy and it helped in improvement of mental state of patient.

3. Yoga-Based Functional Rehabilitation:

Customized asanas [21]. and minor stretches and exercise [20]. to improve flexibility, joint proprioception, and muscle balance were tailored in phase wise form (Table-3).

Phase	Asanas and minor exercises	Goals
Phase 1 (0–1 week)	- Shavasana with deep breathing - Ankle rotations & toe curls - Static quad sets - Pelvic tilts, straight leg raises	- Reduce pain & swelling - Avoid knee strain - Strengthen quads
Phase 2 (1–2 weeks)	- Setu Bandhasana (Bridge pose) - Supta Padangusthasana (Hamstring stretch) - Baddha Konasana - Wall-supported Utkatasana - Apanasana - Isometric quads, straight leg raises, heel slides	- Improve mobility - Strengthen core & glutes - Improve knee flexion
Phase 3 (2–4 weeks)	- Tadasana (Mountain pose) - Vrikshasana (Tree pose) - Ardha Utkatasana - Step-ups, isometric quads, mini squats, bends	- Enhance balance & strength - Prepare for daily activity - Strengthen thighs & glutes

Table 3: Yoga and exercises for rehabilitation

4. Siddha Customized Dietary Protocol:

Anti-inflammatory, vat a-pacifying diet rich in natural herbs, millet-based meals, and detoxification regimens was incorporated in patient's dietary components (Table-4). Patient was to avoid cold foods, curd, fermented foods, raw salads, excessive pulses, caffeine as they hinder tissue recovery [22].

Category	Food ingredient	Benefits for ACL
Millet-Based Meals	Pearl millet, Foxtail millet, Little millet	Easy to digest, rich in fiber, balances Vat, anti-inflammatory
Anti-Inflammatory Herbs	Turmeric, Dry ginger, Long pepper, Saunf	Reduces inflammation, enhances blood flow, promotes healing
Oils for Internal Use	Castor oil, Sesame oil	Lubricates joints, reduces stiffness, detoxifies
Vata-Pacifying Vegetables	Bottle gourd, Ridge gourd, Drumstick	Easy on digestion, improves flexibility, anti-inflammatory
Spices	Cumin, fenugreek, coriander, ajwain	Supports digestion, reduces Ama (toxins), warms up the system
Detox drinks	Dal soup, coriander soup, Palak soup and smoothie	Clears systemic inflammation, aids in gut balance

Table 4: Customized Dietary modulations

Outcome Summary

Following a 30-day integrative intervention using Chakrasiddh Spine Expert Therapy (CSET), the patient reported significant symptomatic and functional improvement, including pain reduction, restored mobility, and improved sleep enhancing her quality of life. Post therapy evaluation based on different clinical inspection findings, pre and post x-rays (Fig-1), ROM, and special tests clearly depicted substantial enhancement (Table-1).

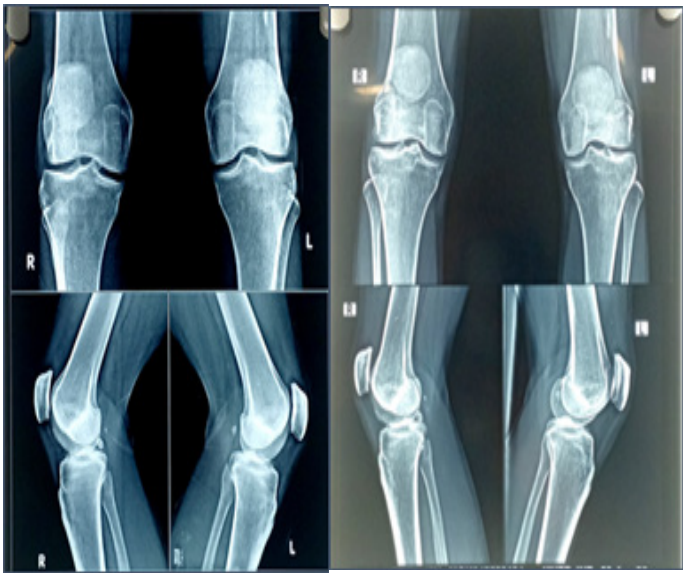

Fig-1: Pre and Post X-rays

Pain during movement measured on VAS decreased from 8 (severe) to 3 (mild) in both knees and lower back region. ROM also improved in terms of full flexion and extension restoration in knee joint and lower back. There were no signs of anterior instability or ligament laxity post-therapy. Patient resumed his daily activities including walking 30+ minutes/day, bending, using stairs, and performing light physical tasks without discomfort or imbalance. Special tests previously positive ACL tests (Lachman, anterior drawer) returned negative, suggesting significant structural and functional improvement. The centre formatted a questionnaire based on the various symptoms and outcome measure scales used pre- and post-intervention, like VAS, TUG (Timed Up and Go) test [15]. KOOS (Knee Injury and Osteoarthritis Outcome score) [23]. for Knee function, Muscle strength through Isometric Quadriceps Strength Test and sleep quality by Pittsburgh Sleep Quality Index (PSQI) [25]. all presented significant clinical improvement. (Table-5).

There were notable improvements in both muscle strength and sleep quality. Isometric quadriceps strength, assessed through manual resistance testing, demonstrated a marked increase in power and endurance from Grade 3 to Grade 4+, indicating improved neuromuscular activation and joint stabilization. Additionally, sleep quality, as evaluated by the Pittsburgh Sleep Quality Index (PSQI), showed significant improvement. Patients reported reduced nocturnal discomfort, minimal sleep disruptions, and enhanced morning refreshment.

The patient also maintained a home-based lifestyle modification and yoga regimen to sustain outcomes. Follow-up at 6-months indicated continued improvement with no relapse of symptoms.

Parameter	Tool	Pre-treatment	Post-treatment
Pain Intensity	*Visual Analog Scale (VAS)*	Lower back -7 Right knee - 8	Lower back - 2 Right knee - 3
Functional Mobility	*Timed Up and Go (TUG) Test (*Time taken (in seconds) to rise from a chair, walk 3 meters, turn, walk back, and sit down. Normal range <10 sec)	18 sec	9.5 sec
Knee Function	*Knee Injury and Osteoarthritis Outcome Score (KOOS)*	Pain intensity high Hampered daily living functions No sports/recreation Low quality of life	Pain intensity: ↓ 45% ADL: ↑ 60% Sport/Rec: ↑ 49% QoL: ↑ 55%
Muscle Strength (Rt Quadriceps strength)	*Isometric Quadriceps Strength Test*	Grade 3	Grade 4+
Sleep Quality	*Pittsburgh Sleep Quality Index (PSQI)*	14 (poor sleep quality)	6 (near-normal sleep quality)

Table 5: Clinical evaluation of various outcome scales

Discussion:

Anterior cruciate ligament (ACL) injuries remain a significant musculoskeletal concern, primarily a sports-related injury that frequently causes knee instability and pain both at knee and in some lower back region [5]. It is seen to affect more males as compared to females due to active muscular use and more representation as athletes, and accidental traumas [3]. While standard management often involves surgical reconstruction followed by structured rehabilitation, increasing attention is being given to integrative and traditional therapy-based interventions that offer holistic, non-invasive alternatives. Chakrasiddh Spine Expert Therapy (CSET), a holistic treatment process developed by

Chakrasiddh, aligns with this global shift by addressing not only the physical damage to the ligament but also the neuromuscular and psychological aspects of healing through a combination of Varmam therapy, Thokkanam (therapeutic massage), energy correction, Yoga's and functional exercises, and individualized dietary interventions [9,32].

The present study is of 43-year male who had injury in his Right knee while playing football and was having Right knee instability and pain in lower back region from last five years. Inspire of conservative management there was no respite to his continuous worsening condition. As part of his initial phase of therapy at Chakrasiddh, localized inflammation and residual swelling around the affected knee joint and stiffness in lumbar region were addressed using Varmam/marma therapy under the CSET. In this study, varmam treatment has been given to restore the strangulated life energy due to trauma. Various Varmam points were gently and precisely stimulated by the practitioner to restore energy flow and promote healing, thereby influencing both physiological and neurological functions of the individual [29]. By targeting the blocked or disturbed Varmam points, the therapy re-establishes the free flow of energy across the body's channels, providing relief from pain, reducing edema and swelling, improving functional mobility, and enhancing systemic balance as documented by some other siddha studies related to management of neuromuscular, musculoskeletal, and traumatic conditions [30,31]. In Ayurveda ACL injuries (Snayugata Vata) have reported substantial improvement in pain, gait, and joint mobility following a 30-day Panchakarma regimen for ACL and meniscus tears where they focus on marma points equivalent to varmam in siddha for curative purpose [28]. A study by Chinese Traditional practitioners emphasizes on combination of acupressure, herbal fumigation and massage therapy for ACL injuries and lower backache to improve circulation, reduce pain, and enhance knee muscle strength compared to standard rehabilitation aligning with the siddha thokannam therapy where different points are kneaded, pressed, and rubbed to get the positive result [10].

To enhance therapeutic efficacy, patient was guided to do hot oil massage every night during this therapy period in accordance with Logisha et al., study which projected that oil massages used in trauma and ligament injuries, provided additional support by penetrating deep tissues, aiding in pain modulation, and promoting soft tissue healing along with varmam therapy [30]. This pattern is also used in the Ayurvedic therapies, particularly in Abhyanga (oil massage), where massages are performed for knee osteoarthritic patients furnishing nourishment and lubricating qualities and for flexing the lower back region [27]. To support the imbalance and to avoid mechanical stress, the patient was also advised to wear knee support compression socks for the first eight days to reduce subacute swelling and back up strength which aligns with a study published in BMC Sports Science, Medicine, and Rehabilitation where compression socks can play a role in enhancing dynamic balance through sensory modulation especially in cases of ACL tears and arthritis [38].

In Siddha medicine, diet and nutrition is regarded as a cornerstone of health and healing. In the case of ACL injuries, siddha stresses on nutritional strategies that promote collagen synthesis and joint lubrication are emphasized. Though this patient did not present with acute inflammation; mild edema and joint tenderness warranted the use of dietary products known for their anti-inflammatory and vat a-pacifying properties like ginger and turmeric. The inclusion of diet such as millet-based meals, herbal diet, and Vata-pacifying foods aids systemic healing and tissue regeneration [33]. Castor oil [35]. and Sesame oil were incorporated in diet for enhancing lubrication in joints. Previous studies on 73 patients with rheumatoid arthritis who were administered 30 to 40 ml of castor oil with hot water daily showed more than 50% reduction in joint pain and about a 48% decrease in joint stiffness over a 15-day period [36,37]. Furthermore, psychological readiness is addressed through energy correction practices unique to Chakrasiddh, which work to restore the body's internal communication and neuromuscular balance, an aspect often overlooked in conventional treatments [13,14]. In our case, yoga's and mild exercises helped in strengthening the surrounding musculature, improving ROM and enhancing functional mobility just like a comparative study done in a group who were treated conservatively (rehabilitation) were satisfied with outcome as compared to their counterparts with knee surgery, demonstrating no subjective difference in activity levels or functional outcomes [29]. Additionally, sleep quality, as evaluated by the Pittsburgh Sleep Quality Index (PSQI), showed significant improvement. A study examining the effects of Swedish massage on patients with rheumatoid arthritis indicated that regular massage sessions led to reduced nocturnal discomfort, minimal sleep disruptions, and enhanced morning refreshment [26]. These outcomes may be attributed to the pain-relieving and nervous system-calming effects of varmam therapy and energy correction techniques employed in CSET, contributing to the restoration of circadian balance and parasympathetic activation. Together, these improvements underline the holistic potential of Siddha-based approaches in addressing both physiological and psychosomatic dimensions of musculoskeletal disorders.

Taken together, these findings suggest that CSET, when framed within the broader context of traditional and integrative medicine, offers a viable, evidence-informed approach for managing ACL injuries. Its multi-dimensional strategy not only targets ligament healing but also supports joint biomechanics, muscular coordination, and psychological resilience – key components for complete functional recovery. In cases where surgical interventions are considered unavoidable, complementary approaches

like CSET may delay or negate the need for invasive procedures, especially in motivated patients with adherence to lifestyle modifications.

Conclusion:

CSET, structured modality deep rooted in Siddha medicine, provided significant pain relief and functional recovery for a patient with chronic low back pain and right ACL tear. As the demand for integrative and non-surgical interventions grows, the exploration of traditional healing systems like Siddha, particularly CSET, offers a promising avenue for Grade II ACL tear management. By integrating physical, energetic, and nutritional modalities, CSET offers a holistic approach that not only targets structural damage but also addresses the underlying energetic imbalances contributing to joint dysfunction. This case-based approach underscores the need for further large-scale clinical trials to rigorously evaluate the safety and efficacy of CSET in musculoskeletal rehabilitation, and positions Siddha as a potential ally in multidisciplinary care. More research is needed to establish Siddha interventions as a validated treatment option, but the initial findings are encouraging.

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