

# Comprehensive Spine Rehabilitation Through Chakrasiddh Spine Expert Therapy (Cset): A Case of Multi-Level Musculoskeletal Disorders

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## Abstract

Musculoskeletal disorders affecting multiple spinal and pelvic regions can severely impair functional mobility and quality of life, especially in younger adults. This case report presents a 30-year-old female from Bangalore with a 3-year history of multi-level spinal dysfunction. She was diagnosed with Avascular Necrosis (AVN) characterized by persistent bilateral hip pain, radiating to her both limbs with left leg predominantly affected and intermittent stiffness in the upper back region, which was exacerbated during prolonged sitting or standing, significantly limiting her daily activities. The patient underwent a customized Integrative Siddha protocol, Chakrasiddh Spine Expert Therapy (CSET) for Complete spine, administered over five-weeks period, followed by scheduled follow-up evaluation after four months. The therapy is a holistic, non-invasive therapeutic approach deep rooted in siddha principles, combining targeted manual pressure manipulation techniques, postural correction, dietary alteration, and customized exercises. Pre and post therapy semi-structured interview based on scales of Visual Analogue Scale (VAS) for pain intensity, Harris Hip Score (HHS) for hip function, Oswestry Disability Index (ODI) for sciatica-related disability, and SF-36 Health Survey for overall quality of life showed substantial pain reduction, improved posture, enhanced flexibility, and restored endurance for standing and sitting.

This case highlights the potential of CSET as a comprehensive rehabilitation modality for managing multi-level musculoskeletal disorders without pharmacological or surgical intervention, offering an integrative pathway to functional recovery and improved well-being particularly in cases refractory to conventional and other alternative therapies.

**Key words:** musculoskeletal disorders; alternative therapy; siddha medicine; cset; quality of life

### Abbreviations:

- CSET - Chakrasiddh Spine Expert Therapy  
VAS - Visual Analogue Scale  
HHS - Harris Hip Score  
ODI - Oswestry Disability Index

### Introduction:

Musculoskeletal disorders involving multiple spinal and pelvic regions represent a significant clinical challenge due to their multifactorial etiology and the complex interplay between structural, neurological, and functional impairments. Conditions such as avascular necrosis (AVN) of the hip, sciatica, and upper thoracic stiffness are often interconnected through biomechanical chain reactions that alter posture, gait, and load distribution across the complete spine and lower limbs [1]. These disorders may result in chronic pain, reduced range of motion, impaired functional capacity, and long-term disability if left untreated or inadequately managed [2]. Although avascular necrosis (AVN) of the femoral head is reported to be five times more common in males, its occurrence in females, though less frequent, is clinically relevant. Falls, hormonal factors, Covid, metabolic disturbances such as vitamin D deficiency, autoimmune predisposition, and corticosteroid exposure may contribute to AVN risk in women [3,9]. Legg Calvé Perthes disease occurs in children where sterile necrosis of the femoral head occurs, requiring a special therapeutic approach underscoring the importance of early detection, non-invasive management, and rehabilitation strategies across age groups [4]. Present case highlights that AVN, despite its male predominance, can manifest in females due to multifactorial influences and warrants equal clinical attention. Early detection of AVN is vital for effective treatment and to minimize the progression of the disease and its associated complications. Conventional medical management for such multi-level musculoskeletal disorders often includes pain management, physical therapy, and potentially surgical interventions [3,4]. While these approaches can provide temporary symptomatic relief, they may not always address the root cause particularly the underlying biomechanical dysfunction and energy imbalance leading to frequent relapses and incomplete recovery [5]. This has given way to traditional healing systems which works on root cause and general well-being of humans. Previous studies have evidence of Avascular necrosis manifesting symptoms beyond localized hip pain, often mimicking as sciatica and contributing to spinal stiffness and sometimes cervical pain [6]. Pain from AVN radiates to the groin, knee, anterior thigh, buttocks, and even lower back, with studies reporting referred pain in up to 77% of affected hips [6,8]. The proximity of the hip joint to the sciatic nerve makes it susceptible to referred pain patterns, where nerve irritation or compression from inflamed periarticular tissues can radiate pain down the leg, mimicking classical sciatica. This phenomenon occurs because neural and musculoskeletal pathways overlap, and hip pathology can present with pseudo-radicular symptoms, which are frequently mistaken for lumbar disc disease [7]. The intense hip pain can lead to pelvic tilt and asymmetrical load to lumbosacral spine; predisposing to disc degeneration or herniation commonly at L5-S1 levels evident as radicular pain radiating along the sciatic nerve distribution, clinically presenting as sciatica. Over time, persistent abnormal gait mechanics cause chronic overactivation of paraspinal muscles and myofascial tension, which, via the thoracolumbar fascia, propagate cranially to the thoracic and cervical regions [8]. This can lead to widespread spinal stiffness, further restricting mobility and perpetuating the pain-dysfunction cycle despite the primary lesion being localized to the hip. Central sensitization mechanisms may additionally amplify pain perception across multiple spinal levels in chronic stages. This interplay between local joint pathology, neural mechanisms, and musculoskeletal adaptation explains how AVN of the hip can manifest as a multi-regional pain and stiffness syndrome [9,10].

### Siddha Medicine and CSET:

Among traditional healing systems, Siddha-an ancient Indian medical practice is widely accepted by South Asian people due to its emphasis on holistic health. Beyond addressing specific diseases, this therapy is recognized for its role in maintaining overall well-being by fostering balance across the physical, mental, and emotional domains [11]. Many studies have proved Siddha to be effective way of addressing musculoskeletal diseases through individualized therapy plans and integrative approach. Chakrasiddh Spine Expert Therapy (CSET), developed by Chakrasiddh, is an integrative Siddha-based therapy protocol designed to address complex musculoskeletal and degenerative conditions such as avascular necrosis (AVN) of the hip, chronic low back pain, and upper spinal stiffness. The therapy combines manual spinal realignment, energy channel activation, personalized yoga-based mobility regimens, and tailored dietary interventions [12]. By correcting biomechanical imbalances originating in the spine and pelvis, CSET reduces abnormal load transmission across the hip joint, thereby alleviating secondary strain on the lumbosacral and thoracic regions [9]. Targeted regimens aimed at restoring spinal alignment and improving neuromuscular control can enhance hip stability, delay degenerative progression, and mitigate referred pain patterns often mistaken for sciatica. Varmam therapy, central to CSET, involves the precise stimulation of vital energy points that regulate neuromuscular and circulatory functions. This activation restores disrupted energy flow, reduces myofascial stiffness, and improves vascular perfusion to periarticular tissues potentially benefitting patients with compromised blood supply as seen in AVN [13,14]. Complementary measures such as Siddha-based dietary regulation, simple exercise practices, and lifestyle adjustments further enhance metabolic health, reduce systemic inflammation, and promote sustained recovery [15]. The integration of dietary modifications and targeted strengthening through mobility exercises supports tissue repair, optimizes hip and spinal joint

The aim of this study is to evaluate the effectiveness of Chakrasiddh Spine Expert Therapy (CSET) in improving functional outcomes, pain relief, and spinal alignment in a patient presenting with avascular necrosis (AVN) of the hip, sciatica, and upper back stiffness and improving the quality of life while potentially reducing dependence on long-term pharmacological management.

A 30-year-old female from Bangalore presented with a 3-year history of bilateral hip pain, radiating pain to both lower limbs with more severity in left leg, and intermittent upper back stiffness. Symptoms worsened with prolonged sitting (>20 min) or standing (>15 min) and walking (>15 min). Functional mobility was significantly restricted, impacting both professional and personal activities. Her medical history mentioned a fall 15 years back from the chair for which she took steroids subsiding her pain gradually. The hip pain started few years back when she took a Vit B injection and gradually worsened after she had covid in 2022. Multiple consultations with orthopaedic specialists were sought, and she was prescribed non-steroidal anti-inflammatory drugs (NSAIDs) such as diclofenac and aceclofenac, muscle relaxants (thiocolchicoside), and neuropathic pain modulators (pregabalin) [3,4]. Additionally, short courses of oral corticosteroids and vitamin D/calcium supplements were advised [10].

### Clinical Examination [16]

### Diagnosis (Siddha evaluation system)

**Laboratory Investigations: [16]**

Investigation	Pre-therapy	Post CSET result	Interpretation (post-therapy)
Erythrocyte Sedimentation Rate (ESR)	42 mm/hr	20 mm/hr (improved)	Indicates reduced inflammation
C-Reactive Protein (CRP)	12 mg/L	< 5 mg/L	reduced
Rheumatoid Factor (RF)	Negative	Negative	Within normal limits
Anti-Cyclic Citrullinated Peptide (Anti-CCP) Antibody	Negative	Negative	Within normal limits
Serum Vitamin D	18 ng/mL	44 ng/mL	Within limits
Complete Blood Count (CBC)	Only Hb (10.2 g/dL) others within normal limits	Hb (11.6 g/dL) Normal	No hematological abnormality

### MRI and X-ray Findings:

**MRI Report-** Lumbar spine: Early degenerative disc changes at L4-L5 and L5-S1, with mild diffuse posterior disc bulge at L4-L5

indenting the thecal sac but without significant neural compression.

**Pelvis:** Minimal sacroiliac joint irregularity suggestive of early sacroiliitis.

**Thoracic spine:** No significant disc pathology on imaging; however, clinical examination revealed upper back stiffness with paraspinal muscle spasm.

**X-Ray-** Avascular Necrosis, Grade III with collapse of femoral head and secondary degenerative changes (Lt hip>Rt hip). L5-S1 degenerative disc disease with foraminal narrowing, likely contributing to sciatica. Early degenerative spondylotic changes in D-3 to D-10 correlating with upper back stiffness.

Outcome Measures [6,18,19]

The assessment was analysed based on pre and post therapy scores of different baseline values gathered from in-house symptom tracking questionnaires and standard clinical tools built on following scales-

- ❖ VAS (Visual Analogue Scale) – Recorded pain intensity (9/10) at start of therapy
- ❖ HHS (Harris Hip Score) – Hip joint function (52/100)
- ❖ ODI (Oswestry Disability Index) – Sciatica-related disability (68%)
- ❖ SF-36 Health Survey – Quality of life (45/100)

Therapy Intervention:

The patient underwent a customized Integrative Siddha protocol, Chakrasiddh Spine Expert Therapy (CSET) for Complete spine, administered over five-weeks period, followed by scheduled follow-up evaluation after four months. CSET therapy intervention included:

1.Targeted Manual Pressure Manipulation (Varmam & Energy points): [20-23]

This component involves applying precise, graded manual pressure to specific Varmam points as described in Siddha medicine, particularly in the lumbar, sacral, and lower limb regions relevant to AVN and sciatica for 30-40 minutes daily for 22 days (Table-2). The stimulation helps release muscle tension, reduce nerve compression, improve blood flow, and restore the balanced flow of Vatha energy. Integrated energy therapy techniques—gentle touch, rhythmic breathing, and focused intention—are used to harmonize bio-energetic pathways (nadis), supporting inflammation control and tissue healing.

Varmam Points (21)	Location	Traditional Action
Ilamkai Varmam	Located on either side of the lumbar spine, over the erector spinae muscle mass	Relieves lower back stiffness, improves circulation to lumbar muscles
Ilamkai Moloa	Near the sacral hiatus (midline, at the base of spine)	Reduces radiating pain to the lower limb, calms <i>Vatha</i>
Mudal Varmam	Midpoint between L2–L3 spinous processes	Reduces nerve root irritation, improves spinal flexibility
Thirumugam Varmam	Posterior iliac crest, 1 fingerbreadth above PSIS	Effective in <i>Sarakka Vaatham</i> (sciatica), relieves hip and buttock pain
Kaal Moolam	At the midpoint of the gluteal fold	Relieves radiating pain, reduces sciatic nerve compression
Kundal Varmam	Outer upper quadrant of the gluteal muscle	Loosens piriformis muscle, eases sciatic nerve irritation
Thaddu Varmam	4 fingerbreadths lateral to the sacrum, over gluteus medius	Improves pelvic alignment and nerve conduction
Adupu Varmam	2 fingerbreadths below the gluteal fold	Improves blood flow and reduces lower limb heaviness
Kaalam Varmam	Mid-calf posterior aspect	Relieves calf tightness, improves lower limb circulation
Saram Varmam	Along erector spinae muscles at upper lumbar	Reduces muscle spasm and stiffness

Table-2: Various Varmam points in Lumbo-sacral, thoracic and pelvic region

2. Postural Realignment and Strengthening exercises: [19]

To correct spinal curvature, pelvic tilt, and gait imbalances along with strengthening core, hip, and back muscles, individualized exercise program was designed. The exercises were performed for 10 minutes daily (Table-3)

Category	Exercise	Therapeutic goal
Postural Realignment exercises	Pelvic Tilts	Corrects anterior/posterior pelvic tilt, improves lumbar alignment.
	Cat-Cow Stretch	Mobilizes spine, enhances posture awareness.
	Wall Angels	Improves thoracic extension and scapular positioning.
	Chin Tucks	Corrects forward head posture, reduces upper back strain.
	Standing Hip Flexor Stretch	Relieves tight hip flexors contributing to lumbar lordosis.
	Shoulder Blade Squeezes	Strengthens scapular retractors for upper back support.
Strengthening Exercises	Bridging	Strengthens glutes, hamstrings, and core.
	Bird Dog	Enhances spinal stability and cross-body coordination.
	Side-Lying Leg Lifts	Strengthens hip abductors to support pelvis.
	Partial Squats	Builds lower limb and core strength without excessive spinal load.
	Planks	Improves core endurance and postural stability.
	Resistance Band Rows	Strengthens mid-back muscles for better posture.

**Table-3:** Various Postural realignment and strengthening exercises

**3. Siddha-Based Dietary Modifications: [24]**

Dietary guidance follows Siddha principles for pacifying aggravated Vatha and Pittam, focusing on warm, easily digestible, anti-inflammatory foods. Spices such as turmeric, dry ginger, and cumin are incorporated for their Vatha-balancing and circulation-enhancing properties, while cold, dry, and excessively spicy foods are avoided. Adequate hydration and seasonal adjustments are emphasized to support joint lubrication and metabolic stability.

**Results:**

The pre- and post-therapy evaluation using validated clinical scales provides an objective measure of the patient’s progress under CSET intervention. Post-CSET, the VAS score showed a significant reduction (VAS ↓ 75%), indicating effective pain relief and improved comfort during daily activities. The improved HHS score (HHS ↑ 70%) reflected enhanced hip mobility, reduced limp, and greater ease in performing functional tasks such as sitting, standing, and walking endurance. The Oswestry Disability Index (ODI) score measuring disability related to lower back pain was very high pre-CSET (68). After CSET therapy, the marked reduction in ODI score (15) demonstrated ODI reduced 78%, enhancing spinal function and reduced disability. The SF-36 Health Survey evaluates overall quality of life across eight domains, including physical functioning, bodily pain, vitality, and social functioning. Initially, poor scores in multiple domains reflected pain-related physical and emotional distress. Post-therapy, the rise in SF-36 scores (89/100) indicated better general health perception, greater activity tolerance, and improved psychosocial well-being (SF-36 ↑ 91%). Collectively, these improvements validate the multi-dimensional benefits of CSET in this case. (Table-4)

Outcome Measure	Pre-Therapy Score	Post-Therapy Score	Change (%)	Clinical Interpretation
VAS (0-10)	9	2	↓ 75%	Significant pain reduction
HHS (0-100)	52	88	↑ 70%	Marked improvement in hip function
ODI (0-100%)	68	15	↓ 78%	Major disability reduction
SF-36 (0-100)	45	89	↑ 91%	Substantial improvement in quality of life

**Table 4:** Pre- and Post-Therapy Evaluation Scores

On re-examination following therapy, the patient showed marked clinical improvement. Pain intensity had reduced considerably, with only mild intermittent discomfort reported at the bilateral hip and lumbar region. Tenderness decreased from Grade-3 to Grade-1 at the hip, sacroiliac joints, and lumbar spine, and was absent in the thoracic region. Paraspinal muscle tenderness was minimal (Grade-0 to Grade-1), and upper back stiffness had largely resolved. The Straight Leg Raise (SLR) test was negative bilaterally, indicating relief from sciatic nerve irritation. Postural assessment revealed restoration of lumbar lordosis and correction of the previously observed pelvic tilt. The elevated levels of ESR and CRP had reduced and were in normal ranges and levels of Hb raised from 10.2 g/dL to 11.6 g/dL. The post therapy radiographic findings clearly depicted





multifactorial etiology and the complex interplay between structural, neurological, and functional impairments [6]. Though, more common in males, this case attracted the attention being present in a female patient; due to multifactorial influences and warrants equal clinical attention [3]. Like in this case, the patient had a fall and the case worsened after covid which is found in many recent studies [9]. Such cases require an integrative approach of multiple therapies along with conventional management [5]. While these approaches may provide symptomatic relief, they often fail to address the complex interplay between musculoskeletal, neural, and systemic factors contributing to disease progression.

This case illustrates that CSET can be effective in multi-level spinal disorders, even in chronic and refractory cases and compared to conventional methods, CSET provided not only symptom relief but also functional restoration. The application of CSET in this case of bilateral hip pain due to early-stage avascular necrosis (AVN), sciatica, and upper back stiffness; conditions that are often characterized by significant pain, restricted mobility, and progressive functional impairment, the post-therapy results indicated positive results in presenting enhanced hip mobility, reduced limp, and greater ease in performing functional tasks such as sitting, standing, and walking endurance as shown by other studies in which VAS, and quality of life improved [12,22]. The combination of manual pressure techniques, posture correction, and lifestyle-based interventions likely contributed to biomechanical realignment and neuromuscular rehab.

CSET modulated by Chakrasiddh, offers a distinct model by integrating Siddha principles of disease causation with targeted biomechanical and neurovascular interventions. In Siddha medicine, Yugi Vaidhya Chinthamani describes Thasai Kootu Noigal (musculoskeletal disorders) and Sarakka Vaatham (sciatic nerve pain), attributing their origin to derangement of Vatha and Pittam. In AVN and sciatica, Vatha derangement is thought to impair structural integrity and nerve conduction, while Pittam aggravation contributes to inflammation and tissue degeneration. In upper back stiffness, Vatha imbalance manifests as muscle rigidity and restricted spinal movement, compounded by Pittam-mediated inflammatory processes [17]. CSET addresses these disruptions by combining spine realignment techniques, varmam (vital energy point) stimulation, and individualized dietary and lifestyle modifications including mild exercises and yoga to restore systemic equilibrium. In this case, action was directed not merely at the site of pain but also at correcting postural imbalances, reducing nerve compression, improving circulation, and calming Vatha-Pittam disturbances. The clinical outcome measured on VAS, HHS and ODI scales presented sustained pain reduction, improved mobility, and enhanced quality of life measured without pharmacological dependence as already achieved in previous case reports of AVN patient [22,26].

CSET's multimodal approach aligns with the principles demonstrated in recent Siddha research. For instance, in a randomized controlled trial on plantar fasciitis, it was reported that Varmam therapy combined with energy sessions resulted in superior pain relief and functional improvement compared to NSAIDs, with sustained benefits and no relapse during follow-up [27]. This mirrors the current case, where the patient experienced lasting relief in pain and improved sitting/standing tolerance without recurrence at four months follow-up. Similarly, another single case documented of lower back pain mentioned Varmam therapy significantly reducing joint pain and decreased reliance on pharmacological interventions [24]. The observed systemic impact on inflammatory symptoms supports the premise that manual pressure on key energy points can influence both local musculoskeletal pathology and broader neuroimmune responses, as seen in the present case. In another clinical study conducted at the Government Siddha Medical College, Chennai, on Vatha disorders found significant improvement in pain scores and mobility in patients with lumbar spondylosis using varmam therapy combined with herbal medicines [28]. Another study on Periarthritis reported reduction in joint swelling and pain after Siddha herbal-mineral formulations and external therapies [29]. Research on varmam point stimulation has demonstrated measurable increases in peripheral circulation and reductions in muscle spasm, suggesting plausible mechanisms for its benefits in sciatica and back stiffness [30]. A report on lumbar degenerative Spondylolisthesis showed positive results on application of both Siddha Marma (Energy) and Thokkanam therapy for 22 days in terms of flexibility and mobility in the joint area [31].

When compared to other alternative therapies, CSET shows lot of similarity to the process that are followed by them like Ayurveda employs therapies such as Panchakarma (detoxification), medicated oil massages (Abhyanga), and herbal formulations for AVN and sciatica which aligns with varmam point manipulations in siddha [32]. Naturopathy focuses on diet, hydrotherapy, and yoga-based rehabilitation, which can improve general health and musculoskeletal function, but may lack the targeted neuromechanical corrections central to CSET [33]. Chiropractic and osteopathic manipulations in Western alternative medicine offer structural realignment benefits but typically do not integrate systemic energetic balancing, a key component of Siddha-based care [34]. The therapeutic principles demonstrated in multiple physiotherapy and mobility exercise studies closely align with the clinical approach of Chakrasiddh Spine Expert Therapy (CSET). Evidence from randomized controlled trials and meta-analyses confirms that structured, stabilization-focused exercises—such as core strengthening, yoga, and tai chi—can significantly reduce pain and improve functional mobility in patients with chronic low back pain. These modalities emphasize key biomechanical objectives like postural correction, spinal realignment, and core activation, which are central to the framework of Chakrasiddh Spine Expert Therapy (CSET) [35,36]. Evidence from energy-touch modalities such as Reiki demonstrates reductions in pain and anxiety versus control/sham in pooled analyses, with one lumbar-pain trial reporting outcomes comparable to physiotherapy, though overall certainty remains limited by small samples and risk of bias [37].

Our CSET protocol integrates these themes (targeted energy point stimulation, and structural realignment) and produced concordant gains across VAS, ODI, HHS, and SF-36. Although formal scientific research on Siddha interventions is still emerging, several studies have reported positive outcomes in chronic musculoskeletal conditions. While these studies are often small-scale and lack the methodological rigor of randomized controlled trials, they provide preliminary support for the musculoskeletal benefits of Siddha-based approaches.

## Conclusion:

This case-based exploration highlights the therapeutic potential of Chakrasiddh Spine Expert Therapy (CSET) and targeted pressure point interventions in managing complex musculoskeletal and neurogenic conditions, such as avascular necrosis (AVN), sciatica, and upper back stiffness. The therapy presents a promising, non-invasive, and holistic approach for the comprehensive rehabilitation of complex musculoskeletal disorders, especially in younger adults where pharmacological and surgical options are not preferred. While conventional pharmacological and physical therapy approaches often provide only temporary symptomatic relief, the observed outcomes in this case suggest that addressing the underlying Vatha and Pittam disruptions—along with structural alignment and muscular balance—may facilitate sustained improvement in pain, mobility, and overall functional capacity. Although these encouraging results are drawn from a single case, larger, well-designed clinical trials are warranted to scientifically validate the safety, reproducibility, and long-term efficacy of CSET in degenerative and nerve-compression-related disorders. Such evidence could position Siddha-based interventions as valuable complementary options within an integrative musculoskeletal care framework.

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