

Ayurvedic Management of Vertebral Compression Fracture—Associated Katishoola: A Case Report

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Abstract- Background: Vertebral compression fracture (VCF) is a common cause of chronic low back pain, particularly in individuals with underlying osteoporosis. In contemporary medicine, management is largely conservative or invasive, with limited non-surgical options. In Ayurveda, low back pain can be correlated with Katishoola, a Vata-dominant disorder. This case report highlights the role of Panchakarma therapies along with oral Ayurvedic medications in the management of VCF-associated Katishoola.

Case Presentation: A 58-year-old male patient presented with severe low back pain associated with tingling sensation radiating to both lower limbs following a trivial trauma. Radiological investigations revealed a chronic wedge compression fracture at L1 vertebra. The patient was treated at Sri Jayendra Saraswati Ayurveda Hospital, Chennai, with a combination of Panchakarma procedures and oral medications for 14 days.

Intervention and Outcome: Assessment was done using the Visual Analogue Scale (VAS), Straight Leg Raising (SLR) test, Oswestry Disability Index (ODI), and Low Back Outcome Score (LBOS). Significant improvement was observed in pain intensity, functional mobility, and quality of life following treatment.

Conclusion: Ayurvedic management with Panchakarma and Shamana therapies demonstrated a beneficial effect in reducing pain and disability in a patient with VCF-associated Katishoola. This case suggests the potential role of Ayurveda as a supportive, non-invasive treatment modality in such conditions.

Keywords: Vertebral Compression Fracture, Katishoola, Low Back Pain, Panchakarma, Matra Basti, Kati Basti.

I. INTRODUCTION

Low back pain is one of the most prevalent musculoskeletal disorders affecting individuals across different age groups. Approximately 30–40% of the global population experiences low back pain at some point in their lifetime. Vertebral compression fracture

(VCF), commonly associated with osteoporosis and minor trauma, is an important cause of chronic and debilitating low back pain. Symptoms include localized pain, restricted movements, tingling sensation, and functional disability, which often worsen on standing or walking.

In Ayurveda, low back pain can be correlated with Katishoola, described under Nanatmaja Vatavyadhi. Vata vitiation due to Dhatukshaya (tissue depletion) and Srotorodha (channel obstruction) is considered the primary pathogenic factor. Panchakarma therapies such as Basti, Snehana, and Swedana are the mainstay of management for Vata disorders. The present case report documents the effect of Ayurvedic interventions in a patient diagnosed with VCF-associated Katishoola.

II. MATERIALS AND METHODS

Type of study- The present study is a case report on the prospective study of *Ayurveda* treatment in the management of patient diagnosed with low backache due to VCF.

Source of Data- A patient referred to the Department of *Kayachikitsa*, SJSACH, Nazarethpet - 600123.

CASE REPORT

A 58-year-old male patient attended the outpatient department of Panchakarma at Sri Jayendra Saraswati Ayurveda Hospital, Chennai, with complaints of severe low back pain for one month. The pain was localized to the lumbar region and was associated with tingling sensation radiating to both lower limbs. The pain was aggravated by standing, walking, and

forward bending, and partially relieved by rest. Sleep was disturbed due to pain.

The patient reported a history of lifting a heavy object prior to the onset of symptoms. He had been diagnosed with mild osteoporosis two years earlier. There was no history of bowel or bladder involvement, trauma, or previous spinal surgery. Personal history revealed a vegetarian diet, irregular bowel habits, and absence of addictions.

III. INVESTIGATIONS

Magnetic Resonance Imaging (MRI) of the lumbosacral spine revealed:

1. Chronic wedge compression fracture of L1 vertebra with approximately 15% reduction in vertebral body height
2. Mild central canal stenosis at L5-S1 level
3. Broad-based disc bulge at L4-L5 with mild bilateral neural foraminal narrowing

Clinical Assessment

Pain intensity was assessed using the Visual Analogue Scale (VAS). Functional assessment was done using Straight Leg Raising (SLR) test measured with a goniometer, Oswestry Disability Index (ODI), and Low Back Outcome Score (LBOS).

Baseline Assessment Values:

1. VAS score: 7/10
2. SLR: Right – 40°, Left – 30°
3. Oswestry Disability Index: 48% (severe disability)
4. LBOS: 32 (poor functional status)

DASHAVIDHA PARIKSHA

Prakriti: Vata-Pittaja

Vikriti: Vata-pradhana Tridoshaja

Sara: Asthi

Samhanana: Madhyama

Satmya: Madhyama

Satva: Madhyama

Ahara Shakti: Madhyama

Vyayama Shakti: Avara

Vaya: Madhyama

Bala: Madhyama

IV. TREATMENT PROTOCOL

- Shamana Chikitsa (Oral Medications)
 1. Dashamoola Kwatha – 40 ml twice daily before food with lukewarm water
 2. Lakshadi Guggulu – 500 mg twice daily after food with lukewarm water
 3. Gandha Taila – 8 drops twice daily after food with lukewarm milk
 4. Ashwagandha Churna and Guduchi Churna – 3 g each twice daily after food
 5. Eranda Taila – 10 ml at bedtime for Mridu Virechana
- Panchakarma Chikitsa
 1. Choorna Pinda Swedana with Kolakulathadi Churna and Dhanwantaram Taila – 30 minutes daily for 14 days
 2. Matra Basti with Sahacharadi Taila – 60 ml once daily for 14 days
 3. Kati Basti with Dhanwantaram Taila and Murivena – 30 minutes daily for 14 days

V. RESULTS

- Post-treatment Assessment Values:
 1. VAS score reduced to 2/10
 2. SLR improved to Right – 60°, Left – 50°
 3. Oswestry Disability Index reduced to 22% (moderate disability)
 4. LBOS improved to 52 (good functional status)

The patient reported significant reduction in pain, improvement in mobility, better sleep quality, and enhanced ability to perform daily activities. No adverse effects were observed during the treatment period.

VI. DISCUSSION

In Ayurveda, Katishool is regarded as a Vataja condition primarily resulting from Vata Prokopa. In the current case study, the patient exhibited a vertebral fracture that resulted in intense lower back pain accompanied by numbness. Acharya Sushruta noted

that pain arises from the imbalance of Vata Dosha. Dhathu Kshaya (malnutrition / depletion) and Srotas Avarodh (obstructions of channels) are the primary pathological reasons for the aggravation of Vata Dosha.

In this instance, the vata prakopa primarily resulted from general dhatukshaya and specifically from asthi kshaya, with Apana Vata being chiefly involved in Kati Shoola. The aim of the treatment is to calm the disturbed Vata Dosha, especially Apana Vata. Thus, Snehana, Swedana, and Basti Karma were employed to balance Vata Dosha and control its movement.

Shamana Chikitsa

Dashmoola kwatha - Dashmoola is a renowned Ayurvedic remedy that balances the three doshas. Because of its Ushna guna, it calms the aggravated Vata Dosha, which is primarily responsible for the illness. Dashmoola kwatha possessed anti-inflammatory and analgesic effects.

Lakshadi guggulu - it comprises Asthishrinkhala, Ashwagandha, and Guggulu. In animal research, Asthishrinkhala countered the antianabolic impact of cortisone during fracture healing. Here produce anabolic oxo steroid that speeds up fracture healing; Guggulu acts as Vedana shamaka and is primarily used in bhagna.

Ashwagandha - Because of its Snigdha Guna, Ushna Virya, it is Vatakaphashamak, Balya (strength enhancing), Rasayan, and Vedanashamak qualities. Withaferien functions as a stimulant and revitalizer for tissues. It reduces pain and swelling (inflammation) and also hinders the effects of aging.

Giloya choorna - Ras Tikta, Katu, Kashaya, Guru Snigdha Gun, Virya Ushna. Snigdha and Ushna Guna that calms the Tridosh Shamak, Rasayana (enhances immunity because of its immuno-modulatory properties). Gentle antipyretic, analgesic (Vedana Sthapak), and antioxidant effects. Due to its antioxidant characteristic, it suppresses the inflammatory mediators and cytokines.

Gandha taila - It includes krishna tila yashti, Bala, Rasna, Padmakadi Gana, Eladi Gana; it has analgesic and anti-inflammatory properties and offers support to

the bones. Bones serve as a crucial site for Vata, and an increase in Vata can lead to bone issues such as osteoporosis. It is primarily indicated for Bhagna and Vata Vyadhi.

Eranda taila – Kashaya (Astringent), Madhura (Sweet), Katu (Pungent), Ushna Virya (hot in potency) balances the Vata and Kapha. It functions as Vatanulomaka and, Mridu Virechaka.

Panchakarma treatments

Snigdha coorna pinda swedana - SCPS was performed using kolakulathadi choorna. The primary components of kolkulathadi choorna include Kola, Kulatha, Surdaru, Rasna Kustha, Vacha, and others, with the majority of substances having a bitter taste, light, dry, and heating properties. It performs Doshavilayana and Srotoshodhana, aiding in alleviating Margavarana of Vata. It will flow to Sukshma Srotas and thereby aid in calming Vata Dosha.

Matra Basti - Matra Basti is a form of Sneha due to its Ushna Guna. Vikalpa of Anuvasana Basti. It extends to Pakwashaya, the primary location for Vata dosha. Matra basti enhances vitality and can be practiced year-round without a rigid dietary plan. It facilitates the effortless removal of Mala and Mutra. As stated by Acharya Charaka Matra Basti serves the role of Brimhana, counteracts dhatukshaya, and mitigates Vata Prakopa. Sahacharadi taila is chosen for Basti karma. The majority of the herbs possess Katu Rasa and Ushna Virya that alleviate Vata and Kapha, diminishing pain and swelling

Kati Basti - Kati Basti is an adapted version of Snehana (oil application) and swedana (steam therapy) performed simultaneously. Through its localized action, it enhances blood flow and alleviates discomfort, providing nutritional and stabilizing benefits. The primary ingredients of Dhanwantaram Taila are balmoola, dashmoola, and ksheera, which possess Vata Shamak, Balya, and Brumhana properties. In murivenna, the primary components are Karanja patra (Pongamia pinnata), Sigu (Moringa oleifera), and Kanya (Aloe vera). Moringa leaf extract has bone-protective effects, anti-inflammatory characteristics, and alleviates pain and swelling.

VII. CONCLUSION

In Katishoola (Low backache), there is a disturbance of vata that causes pain (shoola). In ayurvedic treatment, principles for addressing vata such as Snehana, Swedana, Basti, and Mridu Shodhana are primarily used in conjunction with oral vata pacifying medications. In this case, a patient suffering from severe back pain due to VCF is undergoing treatment with Matra basti using Sahacharadi Taila, Kati Basti with Dhanwantara Taila, and Murivenna, along with Snigdha Choorna Pinda Swedana incorporating Kolkulathadi Choorna and Dhanwantara taila. The patient is also receiving oral medications like Dashmoola Kwatha, Ashwagandha, Gandha Taila, and Lakshadi Guggul, resulting in substantial relief from pain and improved range of motion, measured by the VAS scale, Oswestry low-back pain index, and SLR test, which also enhanced the quality of life. Therefore, this case study offers hope and suggests further research with a larger sample size of patients experiencing low back pain due to VCF

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