

Clinical efficacy of *Dwitiya Baladi Yapana Basti* in the management of *Katigraha* with special reference to lumbar spondylosis: a case series

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ABSTRACT

Background: *Katigraha*, a *Vatavyadhi* characterized by low back pain and stiffness, closely resembles lumbar spondylosis. Due to the degenerative nature of the disease, effective management is essential to improve mobility and quality of life. **Aim:** To evaluate the clinical efficacy of *Dwitiya Baladi Yapana Basti* in the management of *Katigraha* with special reference to lumbar spondylosis. **Methods:** A case series of 10 patients diagnosed with lumbar spondylosis was conducted. *Dwitiya Baladi Yapana Basti* was administered for 14 days. Assessment was carried out on Day 0, Day 14, and Day 28 using Visual Analogue Scale (VAS), Coin Test, Straight Leg Raising Test (SLRT), Lumbar Flexion Measurement (LFM), and Lumbar Extension Measurement (LEM).

Results: Mean VAS score reduced from 7.0 to 2.0, while Coin Test score improved from 3.6 to 1.8. Mean SLRT improved from 70.3° to 82.5°. Lumbar flexion increased from 54.5 to 64.0 and lumbar extension from 25.5 to 30.0. Significant improvement was observed in pain, stiffness, and spinal mobility.

Conclusion: *Dwitiya Baladi Yapana Basti* demonstrated promising results in reducing pain and improving lumbar movements in patients with *Katigraha* (lumbar spondylosis).

The therapy appears safe and effective for managing degenerative low back disorders.

Keywords: *Katigraha*, Lumbar Spondylosis, *Dwitiya Baladi Yapana Basti*, *Yapana Basti*, Low Back Pain, Ayurveda.

INTRODUCTION

Katigraha is one of the common disorders described under *Vatavyadhi* in Ayurveda and is characterized by pain, stiffness, and restricted movements in the lumbar region. The term *Katigraha* is derived from "Kati" (lumbo-sacral region) and "Graha" (stiffness or restriction), indicating impairment of normal movements of the low back. Aggravated *Vata Dosha* localized in the *Kati Pradesh* causes *Shoola* (pain), *Stambha* (stiffness), and restriction of movements, thereby affecting the quality of life of the individual. According to *Gadanigraha* that pain arises due to stiffness (*graha*) which is produced by *saamvayu* (with *Aama*) or *niramvayu* (without *Aama*).^[1]

Lumbar spondylosis is a degenerative disorder of the spine characterized by progressive degeneration of intervertebral discs, vertebral bodies, and facet joints. It is one of the most common causes of chronic low back pain, especially among middle-aged and elderly populations. Clinical manifestations include

pain, stiffness, reduced spinal mobility, and occasionally radicular symptoms.^[2]

The etiological factors responsible for *Katigraha* such as excessive physical exertion, improper posture, aging, trauma, and *Vata*-provoking diet and lifestyle closely resemble the risk factors of lumbar spondylosis. *Aacharya Sharangdhara* included *katigraha* in *vataroga*.^[3] Degeneration of *Asthi* and *Majja Dhatu* along with aggravation of *Vata Dosha* plays a crucial role in the pathogenesis of the disease.

Among the various treatment modalities described for *Vatavyadhi*, *Basti Karma* is considered the prime therapy due to its direct action on aggravated *Vata Dosha*. *Acharya Charaka* has described *Yapana Basti* as a unique therapeutic procedure possessing both *Shodhana* and *Brimhana* properties, capable of nourishing tissues while alleviating *Vata* (*Ubhayarthakar*).^[4] *Dwitiya Baladi Yapana Basti*, described in Ayurvedic classics, contains *Bala*, *Atibala*, *Ashwagandha*, *Dashamoola*, *Godugdha*, *Ghrita*, and *Mamsarasa*, which are known for their *Balya*, *Rasayana*, *Vatashamaka*, and *Dhatu-poshana* properties.^[5]

Considering the increasing prevalence of lumbar spondylosis and the need for safe and effective management, the present case series

Table: General Examination of Patients (n = 10)

Sl. No.	Age/Sex	Pulse (beats/min)	BP (mmHg)	Temperature	Respiratory Rate (/min)	Pallor	Icterus	Cyanosis	Clubbing	Edema
1	58/M	78	130/80	Afebrile	18	Absent	Absent	Absent	Absent	Absent
2	62/F	76	140/90	Afebrile	18	Absent	Absent	Absent	Absent	Absent
3	55/M	80	130/84	Afebrile	20	Absent	Absent	Absent	Absent	Absent
4	49/F	74	120/80	Afebrile	18	Absent	Absent	Absent	Absent	Absent
5	67/M	82	140/90	Afebrile	20	Absent	Absent	Absent	Absent	Absent
6	60/F	78	130/80	Afebrile	18	Absent	Absent	Absent	Absent	Absent
7	52/M	76	126/82	Afebrile	18	Absent	Absent	Absent	Absent	Absent
8	64/F	80	138/88	Afebrile	20	Absent	Absent	Absent	Absent	Absent
9	57/M	78	130/84	Afebrile	18	Absent	Absent	Absent	Absent	Absent
10	61/F	76	128/80	Afebrile	18	Absent	Absent	Absent	Absent	Absent

was undertaken to evaluate the clinical efficacy of *Dwitiya Baladi Yapana Basti* in the management of *Katigraha* with special reference to lumbar spondylosis.

AIM:

To evaluate the clinical efficacy of *Dwitiya Baladi Yapana Basti* in the management of *Katigraha* with special reference to lumbar spondylosis.

METHODOLOGY:

A case series of 10 patients diagnosed with lumbar spondylosis was conducted. *Dwitiya Baladi Yapana Basti* was administered for 14 days, and assessments were carried out on Day 0, Day 14, and Day 28 using VAS, Coin Test, SLRT, Lumbar Flexion Measurement (LFM), and Lumbar Extension Measurement (LEM).

CASE SERIES

Ten patients presenting with complaints of low back pain, stiffness in the lumbar region, and restricted movements diagnosed as Lumbar Spondylosis (*Katigraha*) were selected from the OPD/IPD of the Department of Panchakarma. Diagnosis was based on clinical examination and radiological findings suggestive of lumbar spondylosis.

Table: Ashtavidha Pariksha of 10 Patients

Patient No.	Nadi	Mala	Mutra	Jihwa	Shabda	Sparsha	Drik	Akruti
1	Vata-Kapha	Prakrita	Prakrita	Sama	Prakrita	Ruksha	Prakrita	Madhyama
2	Vata-Pitta	Prakrita	Prakrita	Alpa Sama	Prakrita	Ruksha	Prakrita	Madhyama
3	Vata-Kapha	Vibandha	Prakrita	Sama	Prakrita	Ruksha	Prakrita	Madhyama
4	Vata-Kapha	Prakrita	Prakrita	Nirama	Prakrita	Sheeta	Prakrita	Madhyama
5	Vata-Pitta	Vibandha	Prakrita	Sama	Prakrita	Ruksha	Prakrita	Krusha
6	Vata-Kapha	Prakrita	Prakrita	Alpa Sama	Prakrita	Ruksha	Prakrita	Madhyama
7	Vata-Kapha	Prakrita	Prakrita	Sama	Prakrita	Ruksha	Prakrita	Madhyama
8	Vata-Pitta	Prakrita	Prakrita	Nirama	Prakrita	Sheeta	Prakrita	Sthula
9	Vata-Kapha	Vibandha	Prakrita	Sama	Prakrita	Ruksha	Prakrita	Madhyama
10	Vata-Kapha	Prakrita	Prakrita	Alpa Sama	Prakrita	Ruksha	Prakrita	Madhyama

Inclusion Criteria

- Patients aged between 40–70 years.
- Patients having clinical features of *Katigraha* such as low back pain and stiffness.
- Radiological evidence of lumbar spondylosis.
- Patients willing to participate and provide informed consent.

Exclusion Criteria

- Lumbar disc prolapse requiring surgical intervention.
- Spinal infections, fractures, or malignancies.
- Severe systemic disorders.
- Patients suffering from anorectal disorders.
- Pregnant and lactating women.

Intervention

Dwitiya Baladi Yapana Basti

Ingredients	Quantity
<i>Makshika</i>	30 ml
<i>Saindhava</i>	5 g
<i>Goghrita</i>	20 ml
<i>Tila Taila</i>	20 ml
<i>Kalka</i>	10 g

<i>Dwitiya Baladi Kwatha</i>	120 ml
<i>Godugdha</i>	120 ml
<i>Mamsarasa</i>	20 ml

The patients were administered *Dwitiya Baladi Yapana Basti* once daily for 14 consecutive days following standard *Basti* procedures.

Assessment Criteria

Patients were assessed on Day 0 (BT), Day 14 (AT), and Day 28 (Follow-up).

Subjective and Objective Parameters	
Visual Analogue Scale (VAS)	
Coin Test	
Straight Leg Raising Test (SLRT)	
Lumbar Flexion Measurement (LFM)	
Lumbar Extension Measurement (LEM)	

Demographic Profile of Cases

Parameter	Observation
Total Cases	10
Age Group	40–70 years
Gender	Both Male and Female
Disease	Lumbar Spondylosis (<i>Katigraha</i>)
Duration of Therapy	14 Days

Follow-up	Day 28
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Clinical Outcomes

Table 1: Mean Scores of Assessment Parameters

Parameter	Day 0	Day 14	Day 28
VAS	7.0	2.9	2.0
Coin Test	3.6	2.4	1.8
SLRT (Degree)	70.3	77.8	82.5
Lumbar Flexion Measurement	54.5	61.5	64.0
Lumbar Extension Measurement	25.5	28.0	30.0

Table 2: Percentage Improvement

Parameter	Percentage Improvement
VAS	71.4%
Coin Test	50.0%
SLRT	17.3%
Lumbar Flexion Measurement	17.4%
Lumbar Extension Measurement	17.6%

Observations

All ten patients completed the treatment protocol and follow-up period successfully. Significant reduction in pain and stiffness was observed after 14 days of therapy, which further improved during follow-up. Improvement was also noted in lumbar mobility and functional capacity as evidenced by increased SLRT, lumbar flexion, and lumbar extension measurements.

RESULTS

A total of 10 patients diagnosed with *Katigraha* (Lumbar Spondylosis) completed the treatment with *Dwitiya Baladi Yapana Basti* for 14 consecutive days and were followed up until Day 28. The efficacy of treatment was assessed using subjective and objective parameters including Visual Analogue Scale (VAS), Coin Test, Straight Leg Raising Test (SLRT),

Lumbar Flexion Measurement (LFM), and Lumbar Extension Measurement (LEM).

Effect on Pain (VAS Score)

The mean VAS score was 7.0 before treatment, indicating severe low back pain among the patients. After completion of 14 days of therapy, the mean score reduced to 2.9 and further decreased to 2.0 during follow-up on Day 28. This demonstrates a marked reduction in pain intensity with an overall improvement of 71.4%.

The reduction in pain may be attributed to the *Vatahara*, *Shoolahara*, and *Brimhana* properties of *Dwitiya Baladi Yapana Basti*, which help alleviate aggravated *Vata Dosha* and nourish the affected tissues.

Effect on Tenderness (Coin Test)

The mean Coin Test score was 3.6 before treatment. Following therapy, the score reduced to 2.4 on Day 14 and further to 1.8 on Day 28. This indicates substantial relief in local tenderness and discomfort in the lumbar region, with an overall improvement of 50%.

The reduction in tenderness suggests improvement in local inflammation, muscle spasm, and tissue degeneration associated with lumbar spondylosis.

Effect on Straight Leg Raising Test (SLRT)

The mean SLRT angle improved from 70.3° before treatment to 77.8° after treatment and further to 82.5° at follow-up. Improvement in SLRT reflects enhanced nerve root mobility, reduction in muscular tightness, and increased flexibility of the lumbosacral region.

The observed improvement indicates restoration of functional movement and reduction in pain-related movement restriction.

Effect on Lumbar Flexion Measurement (LFM)

The mean lumbar flexion measurement increased from 54.5 before treatment to 61.5 after treatment and further to 64.0 during follow-up. This represents a significant

improvement in forward bending movements of the lumbar spine.

Improved lumbar flexion suggests reduction in stiffness and increased flexibility of the vertebral joints and paraspinal muscles.

Effect on Lumbar Extension Measurement (LEM)

The mean lumbar extension measurement improved from 25.5 before treatment to 28.0 after treatment and further to 30.0 at follow-up. Enhanced extension movements indicate improved spinal mobility and reduced mechanical restriction in the lumbar region.

The results demonstrate the beneficial effect of *Yapana Basti* in improving functional capacity and range of motion.

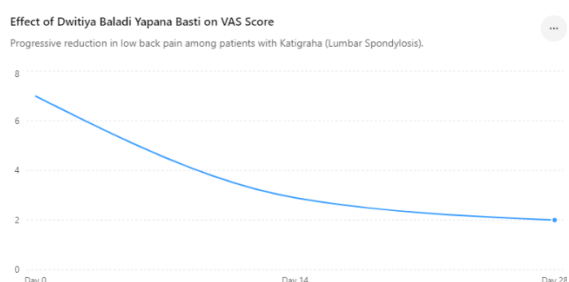
Overall Assessment of Results

The study showed considerable improvement in both subjective and objective parameters. Maximum improvement was observed in pain relief, followed by reduction in tenderness and enhancement of lumbar mobility. Continuous improvement observed during follow-up indicates the sustained therapeutic action of *Dwitiya Baladi Yapana Basti*.

Table: Overall Improvement in Assessment Parameters

Parameter	Before Treatment	After Treatment (14th Day)	Follow-up (28th Day)	% Improvement
VAS Score	7.0	2.9	2.0	71.4%
Coin Test	3.6	2.4	1.8	50.0%
SLRT (Degree)	70.3	77.8	82.5	17.3%
Lumbar Flexion Measurement	54.5	61.5	64.0	17.4%
Lumbar Extension Measurement	25.5	28.0	30.0	17.6%

The findings of the present case series indicate that *Dwitiya Baladi Yapana Basti* is effective in the management of *Katigraha* (Lumbar Spondylosis). The therapy produced significant reduction in pain and tenderness while improving spinal flexibility and functional movements. No adverse effects were observed during the treatment or follow-up period, suggesting that the therapy is safe, well tolerated, and beneficial for patients suffering from degenerative lumbar spine disorders.



DISCUSSION

Katigraha is a common musculoskeletal disorder characterized by pain, stiffness, and restriction of movements in the lumbar region. The clinical presentation of *Katigraha* closely resembles lumbar spondylosis, a degenerative condition affecting the vertebral bodies, intervertebral discs, and surrounding structures. Due to the chronic nature of the disease, patients often experience difficulty in performing routine activities, resulting in reduced quality of life.

In the present case series, ten patients diagnosed with *Katigraha* (lumbar spondylosis) were treated with *Dwitiya Baladi Yapana Basti* for 14 consecutive days. Assessment of treatment outcomes revealed significant improvement in both subjective and objective parameters.

The reduction in pain scores observed after treatment indicates the effectiveness of the

therapy in alleviating the cardinal symptom of the disease. Pain in *Katigraha* is mainly attributed to aggravated *Vata Dosha* and degeneration of supporting structures of the spine. The substantial reduction in pain suggests successful pacification of *Vata* and restoration of normal physiological function.

Improvement in Coin Test scores demonstrated a decrease in local tenderness and discomfort. This may be due to reduction in muscle spasm, inflammation, and irritation around the lumbar region. The therapy also showed a positive effect on spinal mobility, as evidenced by improvements in Straight Leg Raising Test, Lumbar Flexion Measurement, and Lumbar Extension Measurement. Enhanced mobility indicates reduction in stiffness and improved flexibility of the lumbar spine.

The ingredients of *Dwitiya Baladi Yapana Basti* possess *Balya*, *Brimhana*, *Rasayana*, and *Vatahara* properties. These properties help nourish depleted tissues, improve strength, and support normal musculoskeletal function. The *Sneha* components of the formulation contribute to lubrication of joints and soft tissues, thereby reducing stiffness and facilitating movement.

An important observation in the study was the continued improvement seen during the follow-up period. This suggests that the therapeutic effects of the treatment were sustained even after completion of the intervention. The nourishing and rejuvenating actions of the formulation may have contributed to long-term benefits.

No adverse effects or complications were reported during the treatment period, indicating that the therapy is safe and well tolerated. The overall improvement observed in pain, tenderness, and functional parameters demonstrates the effectiveness of *Dwitiya Baladi Yapana Basti* in managing the symptoms of *Katigraha*.

The findings of this case series suggest that *Dwitiya Baladi Yapana Basti* is a beneficial therapeutic approach for patients suffering from lumbar spondylosis. The therapy not only provides symptomatic relief but also improves

mobility and functional capacity, thereby enhancing the overall quality of life of affected individuals.

Probable Mode of Action of *Dwitiya Baladi Yapana Basti*

Katigraha (Lumbar Spondylosis) is predominantly a *Vata-pradhana* disorder associated with *Asthi-Majja Dhatu Kshaya*. The disease manifests with pain, stiffness, restricted movements, and functional disability due to degeneration of spinal structures. *Dwitiya Baladi Yapana Basti* acts through multiple mechanisms to break the pathogenesis of the disease and restore normal functioning.

1. *Vata Shamana* Action

According to Ayurveda, *Basti* is considered the best treatment for *Vata* disorders because *Pakwashaya* is the principal seat of *Vata Dosha*. Administration of *Dwitiya Baladi Yapana Basti* directly influences the aggravated *Vata* and restores its normal function. The ingredients such as *Bala*, *Atibala*, *Ghrita*, *Taila*, and *Ksheera* possess *Snigdha*, *Guru*, and *Brimhana* properties which counteract the *Ruksha*, *Laghu*, and *Chala* qualities of aggravated *Vata*.

As *Vata* becomes pacified, symptoms such as pain (*Shoola*), stiffness (*Stambha*), and restricted movements are significantly reduced.

2. *Brimhana* and *Rasayana* Effect

Lumbar spondylosis is associated with age-related degeneration of intervertebral discs, vertebral joints, and surrounding structures. In Ayurvedic terms, this corresponds to *Asthi* and *Majja Dhatu Kshaya*. *Dwitiya Baladi Yapana Basti* contains *Godugdha*, *Mamsarasa*, *Bala*, and *Ghrita* which are known *Brimhana* and *Rasayana* substances.

These drugs:

- Nourish *Asthi* and *Majja Dhatu*.
- Improve tissue strength and stability.
- Promote regeneration of depleted tissues.
- Delay degenerative changes associated with aging.^[6]

The *Rasayana* effect contributes to sustained improvement even after completion of treatment.

3. *Asthi-Majja Poshana*

Acharya Charaka has emphasized the role of *Basti* in nourishing deeper tissues. The *Tikta-Ksheera-Ghrita* components facilitate proper nourishment of *Asthi Dhatu*^[7], while *Bala* and *Atibala* support *Majja Dhatu*.

The nourishment of these *Dhatus* results in:

- Improved spinal stability.
- Better joint lubrication.
- Reduction in degeneration.
- Increased flexibility of vertebral structures.

4. Anti-inflammatory Action

Many ingredients of *Dwitiya Baladi Yapana Basti* possess anti-inflammatory properties. *Dashamoola* is well known for its *Shothahara* (anti-inflammatory) action. *Bala* and *Ashwagandha* help reduce inflammation and pain around the affected vertebral joints and surrounding soft tissues.^[8]

Reduction of inflammation leads to:

- Decreased local tenderness.
- Reduced muscle spasm.
- Improved range of movement.
- Better functional activity.

5. *Vedanasthapana* (Analgesic) Action

Pain is the cardinal symptom of *Katigraha*. *Bala*, *Ashwagandha*, *Dashamoola*, *Ghrita*, and *Taila* possess *Vedanasthapana* and *Vatahara* properties. These ingredients help relieve pain by reducing nerve irritation, muscle spasm, and inflammatory changes.

This explains the significant reduction observed in VAS scores after treatment.

6. Improvement of Neuromuscular Function

The active components of *Yapana Basti* are absorbed through the rectal mucosa and enter systemic circulation. The rich vascular and lymphatic supply of the rectum facilitates rapid absorption of therapeutic constituents.

The absorbed drugs may:

- Improve nerve conduction.
- Reduce neuromuscular irritation.
- Enhance muscle strength.
- Improve flexibility and mobility.

This may account for the improvement observed in SLRT, lumbar flexion, and lumbar extension measurements.

7. Lubrication of Joints and Soft Tissues

Ghrita and *Tila Taila* provide *Snigdhatta* to the body tissues. In degenerative disorders, excessive dryness contributes to pain and stiffness. The *Sneha Dravyas* present in *Yapana Basti* help restore lubrication to joints, ligaments, and connective tissues.

This action:

- Reduces friction between articular surfaces.
- Increases spinal mobility.
- Decreases stiffness.
- Improves functional activities.

8. Combined *Shodhana* and *Brimhana* Action

A unique feature of *Yapana Basti* is its dual action. It performs mild *Shodhana* by eliminating vitiated *Doshas* while simultaneously providing *Brimhana* and *Rasayana* effects. Unlike ordinary *Niruha Basti*, it nourishes the body without causing depletion.

This combined action:

- Corrects *Dosha* imbalance.
- Nourishes *Dhatus*.
- Improves strength.
- Enhances quality of life.

Overall Mode of Action

Dwitiya Baladi Yapana Basti acts through *Vata Shamana*, *Brimhana*, *Rasayana*, *Asthi-Majja Poshana*, anti-inflammatory, analgesic, and neuromuscular strengthening mechanisms. The synergistic action of *Bala*, *Atibala*, *Dashamoola*, *Godugdha*, *Ghrita*, *Taila*, and *Mamsarasa* effectively interrupts the pathogenesis of *Katigraha* and promotes restoration of normal spinal function. Consequently, significant reduction in pain and

stiffness along with improvement in mobility and functional capacity was observed in the present case series.

CONCLUSION

The present case series demonstrated that *Dwitiya Baladi Yapana Basti* is effective in the management of *Katigraha* with special reference to lumbar spondylosis. Administration of the therapy for 14 consecutive days resulted in significant reduction in pain, tenderness, and stiffness along with improvement in lumbar mobility and functional capacity.

Marked improvement was observed in subjective parameters such as VAS score and Coin Test, as well as objective parameters including Straight Leg Raising Test, Lumbar Flexion Measurement, and Lumbar Extension Measurement. The beneficial effects were sustained during the follow-up period, indicating a lasting therapeutic action of the treatment.

The therapy was found to be safe, well tolerated, and free from adverse effects. The findings suggest that *Dwitiya Baladi Yapana Basti* can be considered a promising Ayurvedic intervention for patients suffering from degenerative disorders of the lumbar spine.

However, since the present study was conducted on a small number of patients, further studies with larger sample sizes and longer follow-up periods are recommended to validate these findings and establish the

therapeutic efficacy of *Dwitiya Baladi Yapana Basti* more conclusively.

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