

Role of *Panchakarma Chikitsa* in the Management of *Katigraha* (Lumbar Spondylosis): A Literature Review

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ABSTRACT

Katigraha is a disease in which Vata gets imbalanced in its *sthana* (seat), causing pain to originate in the joints of *sphika* and *prishtha-vanshashthi*. According to *Gadanigraha*, when *Vata* is affected by *Ama* and is located in *Kati Pradesh*, it exhibits the symptoms of *Katigraha*, namely *Graha* (stiffness) and *Ruja* (pain) in *Kati Pradesh* (lower back). Compared with modern science, the authors can correlate this disease to lumbar spondylosis. Chronic low-back pain affects 4.2% of the population and accounts for almost 50% of total low-back pain related costs. The treatment involves various approaches, including anti-inflammatories, analgesics, muscle relaxants, Non-Steroidal Anti-Inflammatory Drugs (NSAIDs), exercises, traction, and invasive procedures like surgeries. *Panchakarma*, a specialised facet of *Ayurveda*, not only focuses on bringing the body to a state of *Samadosha*, thereby targeting to achieve normal health. With literary evidence supporting its efficacy, *Panchakarma* offers a comprehensive approach in managing such conditions, encompassing curative, preventive, and promotive aspects of health. Databases such as PubMed, Google Scholars, Shodhaganga, etc., were searched, and a total of 12 articles were shortlisted based on various *Panchakarma* interventions being used for the management of *Katigraha*. *Panchakarma* provides a promising avenue for the effective management of *Katigraha*, paving the way for enhanced well-being and improved quality of life for individuals suffering from this condition.

Keywords: *Shodhaganga, Svedana, Snehana, Vatavyadhi*

INTRODUCTION

Ayurveda is an ancient science of life that describes *tridosha* as the regulatory humors of the body. Amongst these *tridosha*, *Vatadosha* holds the position of dominance as it can force the other *doshas*, *Pitta* and *Kapha*, to move from their seats just like strong wind can displace clouds [1]. *Katipradesh* (Lower back) is described as one of the important seats of *Vata dosha* [2], and one of the disorders affecting this region is *Katigraha*, in which *Vata* becomes imbalanced in its own *sthana* (seat), causing pain to originate in the joints of *sphika* and *prishtha-vanshashthi*. According to *Gadanigraha*, when *Vata* is affected by *Ama* and located in *Kati Pradesh*, it exhibits the symptoms of *Katigraha*, namely *Graha* (stiffness) and *Ruja* (pain) in *Kati Pradesh* (lower back) [3].

Lumbar Spondylosis is a disease diagnosed as back pain induced by spine movement and associated with stiffness [4]. It is one of the most commonly found conditions in adults. Lifestyle issues and habits like bike riding, speed breakers, improper posture, heavy weight lifting, and improper rest to the spine are risk factors that aggravate this disease in working adults. Chronic low back pain is diagnosed when pain lasts more than 12 weeks and accounts for almost 50% of total back pain costs [5]. Treatment in other systems of medicine commonly includes anti-inflammatory, analgesics, and muscle relaxant medications. NSAIDs and topical application of heat/ice are also found effective in relieving back pain [6].

Considering the above scenario and the needs of modern society to find an effective cure, it becomes imperative to review or search for safe and effective interventions in cases of *Katigraha* (Lumbar spondylosis). The rationale for conducting a review in this context stems from several factors.

Traditional knowledge vs. modern needs: *Ayurveda*, being an ancient science, provides insights into the understanding of health and disease that have been passed down through generations. However, in the modern context, there is a need to bridge this traditional knowledge with contemporary healthcare demands. This review seeks to explore how *Ayurvedic* interventions, specifically

Panchakarma therapies, can address a prevalent modern health issue like Lumbar spondylosis (*Katigraha*).

Complexity of Ayurvedic conceptual framework: *Ayurveda* employs a comprehensive understanding of the human body, which involves concepts like *Tridosha* (the three fundamental energies), particularly *Vata dosha*, and their influence on health. Lumbar spondylosis is seen through the lens of *Vata* imbalance in *Ayurveda*. Therefore, exploring how *Ayurvedic* interventions target this specific imbalance requires a comprehensive review of existing literature.

Variability in traditional treatments: *Ayurveda* offers a range of interventions, including herbal remedies, dietary modifications, lifestyle changes, and *Panchakarma* therapies. Each of these interventions may have diverse formulations and methodologies, making it essential to review the specific interventions used in treating *Katigraha* to assess their efficacy and safety.

Need for evidence-based practice: In the modern healthcare landscape, there is an increasing emphasis on evidence-based practice. While *Ayurveda* has a rich tradition and empirical evidence, there is a growing need to subject *Ayurvedic* interventions to rigorous scientific scrutiny. By conducting a review of clinical research studies, this review aims to contribute to the evidence base supporting *Ayurvedic* interventions for the management of lumbar spondylosis.

MATERIALS AND METHODS

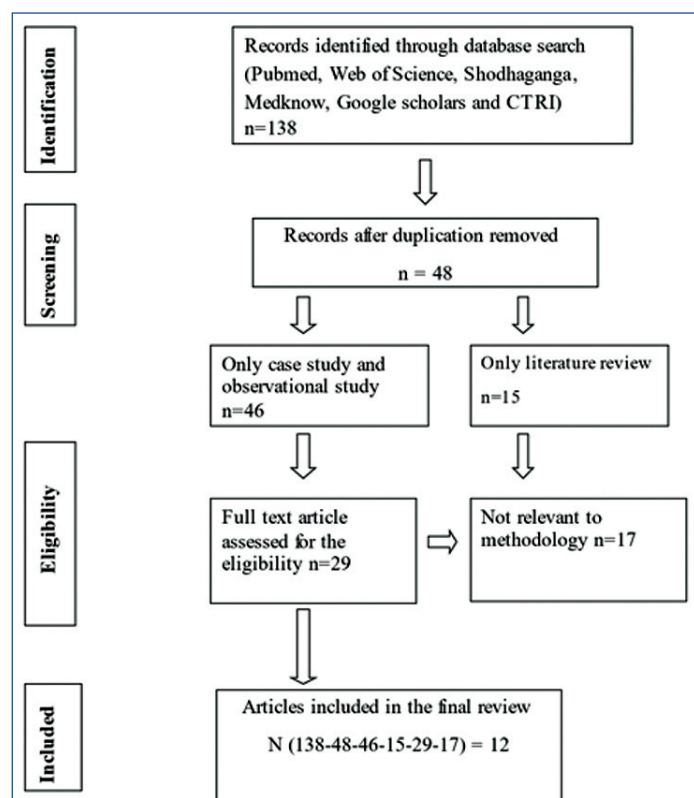
Clinical trials, randomised or non-randomised studies with interventions of various *Panchakarma* modalities available on databases such as PubMed, Google Scholar, Shodhaganga, Cochrane Library, etc., from the year 1995 to August 2021, irrespective of their study centers, were searched. References of key articles were hand-searched using keywords such as '*Katigraha*', '*Panchakarma*', '*Shodhana*', '*Basti*', '*Svedana*', '*Katibasti*', '*Nasya*', '*Katidhara*', '*Upnaha*', etc. The database of the CTRI was also searched with the same keywords to obtain a list of current and completed research on *Katigraha*. Screening of the title, abstract,

and full text of the retrieved articles was independently conducted by two reviewers, and any differences were resolved by a third reviewer.

Inclusion criteria: Data analysis focused entirely on Ayurvedic controlled clinical trials (randomised and non-randomised controlled trials) conducted in patients suffering from *Katigraha* between 1995 and August 2021. Only articles published in the English language were eligible for inclusion.

Exclusion criteria: Ayurvedic review articles on *Katigraha*, Ayurvedic clinical studies on complications of *Katigraha*, related animal studies, case studies or case series, observational studies, and modern studies were excluded from the study.

A total of 138 articles were retrieved after searching the selected databases. Upon an extensive review of literature from the above sources, 48 articles were removed due to duplicity (in the form of articles and listings appearing as citations in Google Scholar). Among the remaining 90 articles, 46 were removed as they were not clinical trials but only case studies and observational studies. From the remaining 44 articles, 15 were removed as they were reviews. Full texts of 29 articles were identified, but among them, 17 were excluded as they contained only *Shamana chikitsa*, *Snehana chikitsa*, or therapies like Marma therapy, Yoga, etc., in the treatment groups. Hence, a total of 12 articles were included [Table/Fig-1].



[Table/Fig-1]: PRISMA flow chart.

S. No.	Author(s) and year	Study subjects, intervention and comparator	Outcomes of the study
1	Parwe S et al., (2020) [7]	Randomised open clinical trial of 15 patients who were administered Ashwagandha taila Matra basti (60 mL) for nine days.	The results achieved were remarkably significant ($p < 0.0001$), indicating that the administration of Madhur Dravya (Ashwagandha Taila) Matrabasti had a statistically significant impact on reducing the intensity of <i>Katigraha</i> symptoms. Similarly, the results were highly significant ($p < 0.0001$) concerning objective parameters, demonstrating the statistical effectiveness of Madhur Dravya (Ashwagandha Taila) Matrabasti in enhancing the range of motion and daily activities for the subjects. The observed percentage relief showed a marked improvement of 40%, moderate improvement of 46.67%, and mild improvement of 13.33%.
2	Amarprakash D et al., (2020) [8]	It was an open, single arm, non-comparative clinical study, 50 patients of <i>Katigraha</i> were enrolled by dividing them in 2 groups (25 in each), Group A was treated with Panchtikta Ghrit Guggulu- 2 Tablet (Each 250 mg) twice a day and Group B was treated with Kati Basti- 2 sittings (Each of 10 days) with Luke warm Ashwagandha Oil- at 10 days interval.	Panchtikta Ghrit Guggulu- internally and Ashwagandha Oil Kati Basti (Locally), showed significant result. It was concluded that most of the symptoms of 'Katyashrit Vata' were significantly relieved with 'Panchtikta Ghrit Guggulu'- internally and Ashwagandha Oil Kati Basti (Locally). The therapeutic efficacy of this specific treatment regimen can be interpreted by combined Action of the drug- 'Panchtikta Ghrit Guggulu' and Kati Basti Therapy.

RESULTS

Comparative review of included 12 articles, Features of study participants and types of intervention with exact outcomes are mentioned in [Table/Fig-2] [7-18].

DISCUSSION

Katigraha is a disease in which Vata gets vitiated and is situated in Katipradesh, producing symptoms like shool and stambh. As it is *Krichrsadhya*, *shamana aushadhi* alone is not enough to treat the disease, so Panchakarma chikitsa is of prime importance, as evident from the success of all the above-reviewed studies.

Role of snehana and svedana in vatavyadhi: For vata vyadhi, Snehana and Svedana are the best line of treatment. Snehana dravya possesses Drava, Sukshma, Sara, Snigdha, Manda, Mridu, Guru [19], which are opposite to Vata, thus alleviating it. When administered, Snehana provides nourishment to emaciated tissue. As *Katigraha* is a Vata vyadhi, Snehana softens the muscles, ligaments, and tendons, correcting stiffness, rigidity in the body, and lubricating the Srotas. Following Snehana, Svedana should be given, alleviating pain, stiffness, oedema, and making the body soft [20]. Repeated administration of Snehana and Svedana ensures that the koshta becomes soft, preventing vayu diseases from permanently lodging there.

Role of virechan in katigraha: Acharya Charak mentioned Mridu Virechan in Vata Vyadhi [21]. If the disease does not subside with Snehana and Svedana, the patient should be given Virechan with mild drugs added with unctuous ingredients. This process cleanses the body of morbidities, stimulates Agni, and is followed by the administration of Snehana and Svedana once again.

Role of basti in vatavyadhi: In Charak Siddhistan, Acharya Charak described Basti as Ardh Chikitsa [22], the best therapy to subdue aggravated Vata. The primary sign of Vata aggravation is pain, making Basti an effective treatment for the disease. Since *Katigraha* is a Vata vyadhi, basti is considered the best treatment for this condition.

Role of bahi parimarjan chikitsa: Katibasti [23] is a Snigdha, Saagni type of Sveda often recommended for conditions like back pain and arthritis. Medicated oils with analgesic and anti-inflammatory properties should be used. These oils help in the formation of lipoidal bonds, aid in the penetration of drug molecules, increase blood circulation to the affected area, balance *Doshas*, strengthen muscles, release toxins, and reduce inflammation.

Patra pinda sveda [24] is a form of Svedana that falls under Pinda Sveda. It involves using leaves of medicinal plants with analgesic, anti-degenerative, and anti-inflammatory properties. This treatment reduces symptoms like Shula and Stambha in *Katigraha*. The Ushna Guna stimulates the sympathetic nervous system and promotes vasodilation. The Sara and Sukshama Guna of Svedana Dravya liquefy *Doshas*, facilitating their excretion through micropores on the skin, resulting in the elimination of vitiated *Doshas* from the body. Both Patrapinda Sveda and Kati basti combine Snehana and Svedana, forming the first line of treatment for *Vata Dosh*.

3	Dixit N (2020) [9]	In this trial, six patients were enrolled and were administered Katibasti with Mahanarayan tail, Kalabasti with Erandamooladi Niruha Basti 625 mL and Anuvasan basti with Sahachar oil along with Rasnaerandadi Kashayam orally for 16 days.	At the end of the study, it was found that the patients reported 81.25% relief in pain, 90.94% relief in stiffness and 83.35% relief in tingling sensation 71.40% relief in numbness.
4	Fernando KPD (2013) [10]	It was an open label clinical trial conducted on 23 patients and were advised Erandmulaadi Yapna Basti for 15 days.	It provided highly significant results in improving Oswestry Disability Index (ODI) Scale, Range of movements and Pain. Erandamuladi Yapana Basti provided statistically highly significant effect on improving <i>Katigraha</i> (back stiffness), Katishula (back pain), Sparsha Asahyata (tenderness), Gridrasivat Pida (sciatic pain), Straight Leg Raise (SLR) test, Pada Harsha (tingling sensation in feet), Pada Gaurava (heaviness in feet), Mamsa Bala Kshaya (decreased muscle strength), Gamane Kashtata (difficulty in movements).
5	Valsan I and Kumar V [11]	In this comparative clinical trial 40 patients were enrolled and were divided in 2 groups, 20 patients in each. Group A was treated with Karpasasthyadi Choornapinda sveda and Group B was treated with Kolakulathadi Choorna pinda sveda. The duration of treatment for both groups was for seven days.	Results were found statistically significant in each group. However, on comparison the results were insignificant in the criteria of pain, stiffness, tenderness, forward bending, backward bending, right lateral flexion, rotation and walking time at $p > 0.05$. Only left lateral flexion was statistically significant at $p < 0.05$. This study concluded that Karpasasthyadi and Kolakulathadi Choorna Pinda Sveda provided equal effect to the patients of <i>Katigraha</i> .
6	Bhende SV et al., (2020) [12]	In this randomised open comparative clinical trial, 30 patients of <i>Katigraha</i> were enrolled by dividing them in 2 Groups, 15 in each. Group-A was given Madhura Dravya Matrabasti (AshvagandhaTail) and Group-B was given Amla Dravya Matrabasti (Chincha Taila) for 9 days. The total study duration was 18 days. Method of Diagnostic Criteria was: 1. Shoola in <i>Katipradesha</i> , 2. Sthambhana in <i>Katipradesha</i> .	After assessing the overall effect of therapy, it was observed that marked improvement was more in Group-B by 53.33% and in Group-A 40% while moderate improvement was 46.67% in both groups. On comparison between 2 groups it was observed that Amla dravya basti was more effective than Madhur dravya basti.
7	Gholap K and Nigam US [13]	In this open randomised clinical trial, 40 patients were enrolled and were divided in 2 groups 20 patients in each. Group-A; Trial group was treated with Prasarni Giloy Matra Basti and Kati basti and Group-B; Control group was treated with Prasarni Taila Matra Basti. Dose of basti was 60 mL. Duration of treatment was 9 days with follow-up on 15 th day.	Overall percentage of relief was more in Group-A (72.33%) than Group-B (64.33%). So, it was concluded that Prasarni giloy Matra Basti and Kati basti is found to be very much symptomatically effective than only Prasarni Taila Matra Basti.
8	Sarmah N et al., (2017) [14]	In this clinical trial, 15 patients were enrolled. They were treated with Rasna Taila Matra basti with dose of 60 mL. Duration of the treatment was 14 days and follow-up was done on 15 th day and 1 month.	The subjective factors including pain, radiation, numbness, stiffness, bending, sitting, standing, and sleeping demonstrated notably positive outcomes for 15 patients with lumbar spondylosis, which were statistically significant. Similarly, objective measures such as SLR and tenderness also showed high statistical significance. The p-value was < 0.001 for all parameters, indicating significant statistical significance.
9	Bhend SV et al., 2020 [15]	This was an open-labelled single arm interventional clinical study and was conducted on 15 patients. Patients were given Madhur Dravya (Ashvagandha Taila) Matrabasti in <i>Katigraha</i> for relieving pain and stiffness for 9 days with dose of 60 mL.	The result obtained were highly significant ($p < 0.0001$) which shows that Madhur Dravya (Ashvagandha Taila) Matra basti was statistically effective in reducing the intensity of symptoms of <i>Katigraha</i> . The result obtained were highly significant ($p < 0.0001$) in objective Parameters which shows that Madhur Dravya (Ashvagandha Taila) Matra basti was statistically effective in increasing the range of motion and daily activities of the subject.
10	Kumar T, (2020) [16]	In this clinical trial, 36 patients were enrolled. Selected patients were categorised into two groups: Samaja <i>Katigraha</i> and Niramaja <i>Katigraha</i> . Then, these patients were further categorised into two groups. In Group-A (Avasthaanusara [stage wise] treatment), patients with Samaja <i>Katigraha</i> , Panchakoladi Upanaha was given once a day till the Nirama symptoms appeared and then Godhumadi Upanaha was used once a day for seven days and the patients presenting with Niramaja <i>Katigraha</i> , Godhumadi Upanaha was used once a day for seven days. Whereas in Group-B (Anavasthaanusara (without considering stages) treatment), Godhumadi Upanaha was used for seven days irrespective of stages.	Patients of low back pain treated with Avasthaanusara (stage wise treatment) had better effect in relieving pain, stiffness and in ODI than the patients treated with Anavasthaanusara Upanaha Sveda without stage wise treatment. Also, patients of Samaja <i>Katigraha</i> treated with Panchakoladi Upanaha had better effect in relieving pain, stiffness and in ODI change than the patients of Samaja <i>Katigraha</i> treated with Godhumadi Upanaha. Thus, it was concluded that Panchakoladi Upanaha was effective in relieving Samaja stage of <i>Katigraha</i> and Avasthaanusara treatment is more effective in the management of <i>Katigraha</i> than that of Anavasthaanusara.
11	Shanbough PS et al., (2018) [17]	It was single blind clinical study conducted on 20 patients and was treated with Sapthasaram kashayam (internally) and Kottamchukkadi taila (external application) in a dose of 50 mL (Kashaya) and 10-15 mL (Taila) was administered twice a day. Total duration of the study was 30 days and Follow-up on 31 st and 45 th day of treatment.	The statistical analysis shows that the result was extremely significant on all the subjective and objective parameters.
12	Gaurav M et al., (2017) [18]	The study was conducted on 30 individuals of <i>Katigraha</i> and were placed in single group and treated with modified Choorna Pinda sveda with duration of treatment being 30 minutes daily for a period of 14 days.	The statistical analysis shows that maximum patients got marked improvement which is statistically significant.

[Table/Fig-2]: Observations derived from the shortlisted researches [7-18].

Limitation(s)

In this review, the quality of individual studies was not assessed, and findings were synthesised quantitatively. The present review applied a limited search strategy. Due to the broad nature of this review, the synthesis and interpretation of findings are limited. The article, being exploratory in nature, does not provide exact decision-making but rather aids in reaching a conclusions about various types of therapies that may be useful in managing *Katigraha*.

CONCLUSION(S)

The comprehensive exploration of the management of *Katigraha*, a Vata-dominant disorder, highlights the significance of a holistic approach in *Ayurveda*. The review has emphasised the intrinsic role of Panchakarma therapies, particularly Snehana, Svedana, Virechan, Basti, and Bahi Parimarjan Chikitsa, in effectively addressing the complexities of this ailment. Snehana, with its unique qualities

opposite to Vata, stands out as a pivotal therapy, softening muscles and lubricating the Srotasa, thereby correcting stiffness and rigidity in the body. The integration of Snehana, Svedana, Virechan, Basti, and Bahi Parimarjan Chikitsa forms a comprehensive treatment protocol that not only addresses the symptoms but also targets the root cause of the Vata vitiation. This approach, based on the ancient wisdom of *Ayurveda*, provides a promising avenue for the effective management of *Katigraha*, paving the way for enhanced well-being and improved quality of life for individuals suffering from this condition.

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