



Research Article

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CLINICAL CASE REPORT TO EVALUATE EFFICACY OF LANKA-LEPA IN MANAGEMENT OF KATI-SHOOLA WITH SPECIAL REFERENCE TO LOW BACK PAIN

Shailesh ^{1*}, Shetty Gautam ², V Vinitha ¹, Nagar Mayur ¹, BA Lohith ³

¹Post-Graduate Scholar, Department of PG Studies in Panchakarma, SDM College of Ayurveda and Hospital, Hassan, Karnataka, India

²Associate Professor, Department of PG Studies in Panchakarma, SDM College of Ayurveda and Hospital, Hassan, Karnataka, India

³Professor & HOD, Department of PG Studies in Panchakarma, SDM College of Ayurveda and Hospital, Hassan, Karnataka, India

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*Corresponding author

E-mail: shettyshailesh9@gmail.com

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ABSTRACT

Over the past years, advances in the acute pain management have continued, although reports of inadequate pain relief in hospital patients persist. Low-back pain is one of the top five reasons for which patients seek care; it reports for 5% of all visits to primary health care providers, chiropractors and physiotherapists. Only conservative treatment is available in modern medicine with much limitation. Many health care professionals are routinely approached for help with low back pain. This article is about the clinical study of 5 patients of Kati-Shoola (Low-back pain) registered from the Out-patient door, Department of Panchakarma, SDM College of Ayurveda and Hospital, Hassan. The present study is aimed at finding effective management of Kati-Shoola. The drugs selected for managing the patients of Kati-Shoola were Lanka (*Capsicum annuum*), Lasuna (*Allium sativum*), Ardraka (*Zingiber officinale*), Nagavalli patra (*Piper betle*), Saindhava (Rock salt). This formulation was one of the efforts towards ayurvedic clinical research which was tried and successfully incorporated as an adjuvant procedure in the management of Kati-Shoola. In this clinical study patients got significant improvement and no complications were found during and after the clinical study.

Keywords: Ayurveda, Kati-Shoola, Panchakarma, Kati-Graha, Lanka, Low-Back Pain

INTRODUCTION

A disagreeable sensory and emotional experience linked with substantial or possible tissue damage or expressed in terms of such damage can be interpreted as pain. In medical diagnosis, pain is a symptom that is subjective in nature¹. Patients with low back pain can be divided into two groups, the acute group and the chronic group. Patients in whom the pain may be severe but short standing can be considered under acute group and patients having low back pain, lasting for more than 3 months, are usually considered under chronic group². Low back pain is a common symptom globally. In classics, there are some descriptions about some symptoms like Kati-shoola (Low-back pain)³, Thrika (Sacrum), Shoola (Pain)⁴, Thika-Graha (Stiffness)⁵ etc.; these symptoms resemble low-back pain. Thus, Kati can be considered as loin or lumbar in other words lower

part of the back and sides between the ribs and the pelvis. The term Kati is considered as Hip, and Buttocks⁶. Kati (Low-Back), Shoola (Pain) is another term used as a synonym of Kati-Graha. The origin of Kati-Graha is from two words, viz Kati and Graha, here Kati signifies the region of low back and the word Graha means holding or Stiffness. The most suitable meaning in this context is grasping pain; hence Kati-Graha means the grasping pain at the low back region⁷.

Case Presentation

Present study was carried out in accordance with ethical principles by following International conference of Harmonization-Good Clinical Practices Guidelines (ICH-GCP).

Case Summary

Table 1: Case summary in brief

Patient 1	Patient 2	Patient 3	Patient 4	Patient 5
Patient 1, aged 67 years, reported with complaints of low back pain, more in flanks radiating to calf muscles	Patient 2, aged 56 years, reported with complaints of low back pain and loss of strength in both lower limb	Patient 3, aged 28 years, reported with complaints of low back pain associated with pain in right shoulder	Patient 4, aged 51 years reported with complaints of low back pain and associated pain in nape of neck	Patient 5, aged 70 years reported with complains of low back pain

- Since low back pain was common in all five cases, they were advised for Lanka lepa to Kati pradesha (Site) for first 4 days.
- There was a marked reduction in pain during the course of treatment.

Patient Description

Table 2: Description of patients in brief

Name of patient	Patient 1	Patient 2	Patient 3	Patient 4	Patient 5
Age	67	56	28	51	70
Gender	Male	Male	Male	Male	Female
Nationality	Indian	Indian	Indian	Indian	Indian
State	Karnataka	Karnataka	Karnataka	Karnataka	Karnataka
District	Coorg	Coorg	Hassan	Kolar	Arsikere
Appearance	Old age, grey hair, wrinkles	Middle age, grey hair	Adult	Middle age, grey hairs	Old age, grey hairs, wrinkles
Physical and mental disposition	Obese	Average	Well built	Average	Average
Occupation and economic status	Agriculture, upper middle class	Retired government servant, upper middle	Business, upper middle class	Agriculture, upper middle class	House wife, lower middle class

History of Patients

Table 3: Past history of patients

Patient 1	Patient 2	Patient 3	Patient 4	Patient 5
History of presenting illness Patient was apparently normal 2 months back; gradually started complaining of low back pain, more in flanks radiating to calf muscles	History of presenting illness Patient was apparently normal 3 years back, he had an episode of stroke after which he had low back pain and loss of strength in both lower limb	History of presenting illness Patient was apparently normal 2 years back, he gradually started complaining of low back pain associated with pain in right shoulder	History of presenting illness Patient was apparently normal 2 months back, he gradually started complaining of low back pain and associated pain in nape of neck	History of presenting illness Patient was apparently normal 2 years back, she gradually started complaining of low back pain which aggravated since 15 days

Complaints

Table 4: Complaints of patients in brief

Patient 1	Patient 2	Patient 3	Patient 4	Patient 5
Pain in low back radiating to flanks Pain in hip joint Pain in bilateral shoulder joint radiating to back-2 months	Pain in low back Loss of strength in both lower limbs Increased sweating while walking -1 ½ years Burning sensation in chest - 6months	Pain in low back region- 2 years Pain in right shoulder joint radiating to neck- 1 year Pain increases during night	Pain in low back region- 2 months Pain in nape of neck- 1 week	Pain in low back region- 2 years Pain increased since 15 days

Examinations done on patients on baseline findings

Table 5: Examinations done on patients on the day of admission

Patient 1	Patient 2	Patient 3	Patient 4	Patient 5
SLR: Right-Negative Left- Negative Coin test: Negative Femoral nerve stretch test: Negative	SLR: Right- Negative Left- Negative Coin test: Positive Femoral nerve stretch test: Negative	SLR: Right-Negative Left- Negative Coin test: Negative Femoral nerve stretch test: Positive	SLR: Right-Negative Left- Negative Coin test: Negative Femoral nerve stretch test: Negative	SLR: Right-Negative Left- Negative Coin test: Negative Femoral nerve stretch test: Negative

Lanka lepa has shown encouraging results in attaining Vedana shanti, Laghutva and Chesta (Range of Movements) in Kati-Shoola.

Assessment

Self-assessment by the patient based on logarithmic pain assessment scale (international standard for comparative pain assessment scale).

Investigations

Table 6: Laboratory parameters on the day of admission

Sl. No.	ESR
Patient 1	02 mm/h
Patient 2	06 mm/h
Patient 3	04 mm/h
Patient 4	14 mm/h
Patient 5	18 mm/h

Table 7: Pain Assessment Scale

Symptom	Grade
No pain	Grade 0
Pain during work	Grade 1
Pain at Rest	Grade 2

Diagnosis

Table 8: Final Diagnosis

Patient 1	Patient 2	Patient 3	Patient 4	Patient 5
Gridhrasi	Kati-Shoola with Pangu	Gridhrasi	Kati Graha	Kati Graha

Primary symptom in all three patients was Kati-Shoola so Lanka lepa was adopted for the symptomatic relief

Management and Outcome

Treatment Plan

Patients had come to our Out-patient door with primary complains of low back pain along with other associated symptoms. They were admitted into our In-patient door and our initial approach was towards reduction in pain. So we planned Lanka lepa for the first four days for symptomatic pain relief; after attainments of satisfactory reduction in pain, other procedures were planned accordingly.

Ingredients

- Lanka (≈30g)
- Tambula patra (≈3-4 in number)
- Ardraka (≈10g)
- Lashuna (≈10g)
- Saindhava lavana (≈2 g)
- Murchita tila taila (Processed sesame oil) for local anointment before application of lepa.

Method of Preparation of Lepa

- Wash the ingredients to remove the dust and mud particles
- Cut it into small pieces and grind it well in a grinder
- Add saindhava to it

Method of Application of Lepa

- Anoint the body part with prescribed oil to reduce the excess irritation caused by the lepa
- Then apply a thin layer of Lanka lepa uniformly to that part and cover it with kadali patra (Banana leaf)
- After an hour, remove the lepa and wash the body apart with normal water

Schedule

- Lanka lepa was applied to the Kati pradesha (Lumbar region) of the patients twice daily during the first 4 days of admission

Midpoint and Progress

- During the course of treatment patients were advised to take laghu (light), supachaya bhojana (easily digestible) for the improvement of Agni.
- As Lanka lepa can be included under niragni swedana (Sudation) it may relieve stambha (Stiffness) by the ushana (Hot), tikshna (Penetrating) and snigdha (Oiliness) guna along with srotosuddhi (Cleansing channels) and amapachana (Digestion).
- Swedana does the elimination of kleda (Moistness) and laghutwa (Lightness) can be achieved.
- Swedana liquefies kapha and does the srotosodhana.

Endpoint Findings

- There was marked reduction in severity of pain
- Improvement in patients personal and occupational activity

Before Treatment-After Treatment Comparison

Table 9: Estimation of overall response

Patients	Complaints	BT	AT
Patient 1	Kati-Shoola	Grade 2	Grade 0
Patient 2	Kati-Shoola	Grade 2	Grade 1
Patient 3	Kati-Shoola	Grade 2	Grade 0
Patient 4	Kati-Shoola	Grade 2	Grade 0
Patient 5	Kati-Shoola	Grade 2	Grade 0

BT: Before Treatment, AT: After Treatment

DISCUSSION

Probable Mode of Action of Lanka Lepa

The main causative factor responsible for pathogenesis and modulation of inflammation and pain in arthritis is a peptide called 'Substance P'. Local application of capsaicin to the peripheral sensory endings in the skin results in depletion of this substance P from the whole neuron, both peripherally and centrally, hence it can be used in relieving pain⁸. It has been interpreted that *Allium sativum* powder possesses promising analgesic and antinociceptive properties, possibly exerts its effect through diverse mechanisms that may involve both central pain inhibitory mechanism as well as peripheral pathways

through inhibition of prostaglandin synthesis. *Allium sativum* powder may serve as a potential adjuvant for management of various painful conditions⁹. The rhizome extract of *Zingiber officinale* was proved to possess anti-inflammatory and analgesic properties when tried on albino rats and swiss mice respectively¹⁰. Methanolic extract of *Piper betle* leaves was found to be having strong analgesic, anti-inflammatory and antioxidant effects, establishing the traditional adoption of this plant for inflammatory pain mitigation to its antioxidant capability¹¹. The ingredients of Lanka lepa i.e., Lanka, Lasuna, aardraka, nagavalli patra, saindhava are basically katu (Pungent), tikta (Bitter) and lavana (Salty) rasa (Taste), due to

which Lanka lepa may act as a potent vata-kapha hara (Alleviating) yoga¹².

From the above references, it can be stated that all the ingredients present in Lanka lepa are having analgesic, anti-inflammatory and anti-oxidizing effect which would undoubtedly help in reducing pain.

CONCLUSION

Lanka lepa is an anubhuta (Preparatory) yoga (Formulation). We had considered Kati-Shoola as a symptom; so the effort was towards reduction of shoola, which was attained after four days of Lanka lepa. The primary ingredient capsaicin (green chilies) present in the lepa is known for its analgesic and anti-inflammatory activity. According to classics, ingredients like Lanka, nagavalli patra, lasuna, ardraka, saindhava are having vataghna, shulagna (Reducing Pain), shothahara (Reducing swelling) properties. The treatment schedule adopted was lepa for first 4 days for symptomatic relief from pain; later other treatment modality was adopted as planned hence the shoohalara effect of lepa was purely based on Lankalepa.

REFERENCES

1. International Association for the Study of Pain Taxonomy- ISAP. <https://www.iasp-pain.org/Taxonomy>. Published by ISAP 1994. Last Updated on 22nd May, 2012
2. Szpalski Marek, Gunzburg Robert, Rydevik L Björn, Huec Le Jean-Charles, Mayer MichaelH(Editors). Surgery for Low Back Pain. Berlin. Springer. 2010;11pg
3. Bhavamishra. Madhyama Khanda, 24/115. Edited by Misra Brahma Sankara. Bhavaprakasha with Vidyotini Commentary. 2013 Edition. Vol-2, Varanasi: Cahaukamba Sanskrit Bhawan, 2013; 240pg
4. Bhavamishra. Madhyama Khanda, 24/116. Edited by Misra Brahma Sankara. Bhavaprakasha with Vidyotini Commentary. 2013 Edition. Vol-2, Varanasi: Cahaukamba Sanskrit Bhawan, 2013; 240pg
5. Kayachikitsa Khanda, 19th Chapter. Tripathi Indradeva, Pandeya Ganga Sahaya (editor). GadaniGraha. Reprint 2011 edition. Part-2, Varanasi: Chaukhambha Sanskrit Sansthan. 2011;508pg
6. Gaud Damodarsharma. Shareera Shabda San Graha. Parishabdham Shabdharma Shareeram, Second edition, Nagpur:Shri Baidyanath Ayurved Bhavan Limited. 1979;10pg
7. Agnivesha, Charaka, Dridhabala. Chikitsa Sthana, Chapter 15 verse 45. Tripathi Brahmanand (editor). Charaka Samhita with Charaka Chandrika Commentary. Reprint 2015 edition. Vol-2, Varanasi: Chaukamba Surbharati Prakashan. 2015;551pg
8. Zhang, W.Y. & Li Wan Po, A. Eur J Clin. The Effectiveness of Topically Applied Capsaicin. European Journal of Clinical Pharmacology. July 1994. Volume 46, Issue 6;517pg to 522pg
9. Jayanthi MK, Jyoti MB - Jayanthi MK et al. Experimental Animal Studies on Analgesic and Anti-nociceptive activity of *Allium sativum* powder. The Indian Journal of Research and Reports in Medical Sciences. January-March 2012, Vol-2(1).
10. Raji Y, Udoh U S et al. Anti-Inflammatory and Analgesic properties of the Rhizome Extract of *Zingiber officinale*. African Journal of Biomedical Research. September-2002, Vol-5. Ibadan Biomedical Communications Group,121pg to124pg.
11. Alam Badrul et al. Antioxidant, Analgesic and Anti-Inflammatory activities of the Methanolic Extract of *Piper betle* Leaves. Avicenna Journal of Phytomedicine. March-June 2013, Vol-3(2). Pub Med Central ID 4075698;112pg to 125pg
12. Bhavamishra. Pandey G S. Bhavaprakasha Nighantu, commentary by Chunekar K C. Reprint 2004 edition. Varanasi: Chaukhambha Bharati Academy. 2004;14pg,131pg,145pg,271pg and 834pg

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