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MANAGEMENT OF CHRONIC LOW BACK PAIN W.S.R *KATI SHOOLA* – A CASE REPORT

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ABSTRACT

Low Back Pain is defined as pain, tension, or rigidity that occurs between the 12th rib posteriorly and the gluteal line. Non-specific LBP (NSLBP) is defined as tension, soreness and/or stiffness of unknown etiology in the lower back region with joint, disc and connective tissue involvement potentially contributing to symptoms. Here we report a case of Low back pain which was treated with integrated management which included Ayurveda and physiotherapy. Reduction was in the parameters like *Ruja*, *Stambha*, *Suptata* and Range of movements was seen at different time points when compared with baseline. The adopted treatment has given promising results further research in the direction is essential for producing evidence based results.

Keywords: *Katishoola*, Non- Specific Low Back Pain, Physiotherapy, *Panchakarma*

INTRODUCTION:

Non-specific low back pain (NSLBP) is the leading cause of disability caused by various spine-related disorders, including intervertebral disc degeneration, disc

herniation, spinal stenosis, and facet arthritis **[1]**. Low back pain (LBP) is a global healthcare concern causing more global disability than any other medical condition. It is estimated that up to 84% of adults have LBP at some time in their lives. The vast majority of patients seen in primary care (> 85%) will have undefined LBP. Patients who continue to have LBP beyond the acute period (4 weeks) have subacute back pain (lasting between 4 and 12 weeks), and some may go on to develop chronic back pain (lasting >12 weeks) **[2]**.

In *Ayurveda* Non-specific Low back pain can be compared to cluster disorders of *Vata vyadhi* i.e.specially to *Katigraha, Gridrasi, Khalli* with specific common symptoms like *Shoola/Ruja*(pain), *Stambha* (stiffness), *Suptata* **[3]**. As *Vata vyadhi* itself suggests pain as a predominant symptom. The *Samanya chikitsa sutra* for *Vata vyadhi* includes *Sneha, Sveda, Samshodana, Agnikarma, Raktamokshana, Lepa, Basti* etc. **[4]**.

Patient information:

A unmarried 38 year old female non diabetic, non-hypertensive patient presented with complaints of pain and mild stiffness in the lower back region since 2 years. She was feeling difficulty in bending, sitting on the floor and to perform her daily routine activities. Past three months the pain aggravation was seen as the workload in the house was increased. Loss of appetite, disturbed sleep and general weakness were the symptoms associated with the pain. The patient was under the treatment of modern medicine consultant with the prescription of anti-inflammatory and analgesic drugs. Symptomatic relief was obtained during the consumption of medicine and again the pain use to aggravate on strenuous work. The case was treated at KLE Ayurveda Hospital, Belagavi, Karnataka from 8/11/2022 to 20/12/2022 (MR number- 19019383, OPD – 19014383, IPD - 2205862). Past history and family history were not specific to the disease. She has regular and normal menstrual cycle with no any significant history (3 - 4 days / 28 days). She was thin built and moderately nourished with presence of pallor. Icterus, cyanosis, clubbing, lymphadenopathy was absent on examination. Systemic examination like cardiovascular, central nervous system and respiratory were found normal with blood pressure (110/70 mm of Hg), pulse rate 80/min, Height 160 cm, Weight - 56kg, BMI - 21.9. Local examination of the lumbar region revealed tenderness and stiffness at Para spinal region. Restricted range of lower back movements were observed i.e. forward flexion 50 degree, right lateral flexion 25 degree, left lateral flexion 25 degree and extension of 15 degree. Straight Leg Raising Test (SLR test) was positive at 60 degree on both sides. Pain was assessed with Numerical Pain Rating Scale (NPRS) i.e.

7/10, VAS (Visual Analogue Scale) i.e. 8/10, VRS (Verbal Rating Scale) i.e. 8/10. Routine blood investigations like Complete Blood count, Urine examination were found normal but only Haemoglobin percentage was 10gm/dl. X ray of the lower back region with anterior-posterior and lateral view did not showed any significant changes.

Timeline:

Patient developed complain of pain in lower back region, mild stiffness in lower back in 2021 and was advised with analgesics drugs. X ray was performed but no significant changes were seen. In December 2022 due to aggravated pain the patient was advised with routine blood investigations along with x ray at KLE Ayurveda Hospital.

Diagnosis:

The diagnosis was established considering the *Kati Shoola* and *kati Stambha* as main symptoms for differential diagnosis of the disease *vataja gridrasi (Kati-shoola)* and *vata-kaphaja Gridrasi (Kati shoola + kati stambha) , Kati Graha (Kati Shoola + Stambha)*. The patient did not present with radiating Pain i.e., *Sphik Poorva Kati Prishta uru janga paadat kramat* so *Vataja* and *Vata-Kaphaja Gridrasi* was excluded. Considering Low back pain with stiffness as main symptoms, specific and non -specific back pain can be taken for differential diagnosis, as the patient did not had any radiological changes in Lumbar Spine, the case was diagnosed as non-specific low back pain and accordingly the integrated treatment was planned.

Treatment

The treatment was focused considering the history, symptoms and the type of *dosha, dushya* involved in the disease manifestation. Integrated treatment protocol i.e., *Ayurveda (Basti* along with Oral medications) and Physiotherapy was planned. *Ayurveda* treatment **(Table 1)** advised was *dashamula niruha basti, alabu karma* (Cupping therapy) along with oral medications like *yogaraja gugggulu, dashamularistha* and *hingvastaka choorna, avipattikara choorna* and *Dhanwantari taila* local application.

Follow up and outcome

Patient was discharged on 9th day and pain and stiffness **(Table 2)** were assessed every 0 day upto 28 days. It took 14 days to get reduced complaints of Pain and difficulty in movements of Low back. Now the patient is able to do her daily activities without difficulty. The Clinical parameters were assessed on different time points to see the efficacy of the treatment. *Ruja* (Pain) was assessed with VAS scoring, *Stambha* (Stiffness), *Suptata* (numbness) were assessed by grading, Range of motion by Goniometry and modified Scobers test.

Table 1: Therapeutic intervention and oral medicines

Plan of care	Procedure	Duration(DAYS)			
		1 - 9	14	21	28
Niruha Basti	*Dashamoola niruha basti* *madhu -50ml,saindhava- 5gm* *Sneha - Sahacharadi taila 70ml* *Kalka-shatapuspha-10gm* *Rasna-10gm, Guduchi – 10gm* *Yastimadhu – 10gm* *Kashaya- dashamoola Kashaya -300ml* *Go arka -50ml*	✓			
Anuvasana basti	*Dhanwantara taila – 50ml*	✓			
Physiotherapy	HMT (Hanson manual therapy) TENS (Transcutaneous electric nerve stimulation)	✓			
Dashamoola arista	10ml twice daily after food	✓	✓	✓	✓
Hingavastaka choorna	½ tea spoon full twice daily before food	✓	✓	✓	✓
Avipattikara choorna	½ tea spoon full night with warm water	✓	✓	✓	✓
Yoga raja guggulu	500 mg tablet twice daily after food	✓	✓	✓	✓
Exercise	Bridging Trunk Rotation Cat And Camel Exercise Back Extension Static Back Extension	✓	✓	✓	✓

Table 2: Assessment of Clinical parameters on different time points

PARAMETERS	Assessment (DAYS)							
	1	3	5	7	9	14	21	28
VAS	8/10	7/10	6/10	4/10	2/10	0/10	0/10	0/10
Stambha	3	3	2	2	1	0	0	0
Suptata	3	3	2	2	2	1	0	0
Range of motion								
Forward Flexion (in degree)	50	55	60	75	80	80	80	80
Right Lateral Flexion (in degree)	25	25	30	30	35	35	35	35
Left Lateral Flexion (in degree)	25	30	30	30	35	35	35	35
Extension (in degree) (20 TO 30)	15	20	25	30	30	30	30	30
Modified Scobers test	4 cm	5 cm	5cm	6cm	6cm	6cm	6cm	6cm
Oswestry Low Back Pain Disability questionnaire								
Pain intensity	3	-	-	-	2	2	1	1
Personal care	2	-	-	-	1	1	1	1
Lifting	3	-	-	-	1	1	0	0
Walking	3	-	-	-	2	1	0	0
Sitting	2	-	-	-	1	1	0	0
Standing	3	-	-	-	2	2	1	1
Sleeping	2	-	-	-	1	1	0	0
Social life	2	-	-	-	1	1	0	0
Travelling	2	-	-	-	1	1	0	0
Employment/ Homemaking	3	-	-	-	1	1	0	0

DISCUSSION Low back pain is divided into three categories based on the pain duration. The acute low back pain lasts for less than four weeks, subacute type for four to eight weeks, and the chronic type for more than eight weeks **[5, 6]**. Treatment of low back pain could be pharmacologic or nonpharmacologic. Pharmacologic treatment include analgesics, anti-inflammatory drugs, muscle relaxants, etc. and nonpharmacologic treatment could be surgical and nonsurgical **[7]** among nonsurgical treatments thermotherapy is an adjuvant one used to relieve pains nowadays either in a superficial (for skin) or deep (for joints and muscles) way **[8]**.

As *Vata vyadhi* itself suggests pain as a predominant symptom. The *Samanya chikitsa sutra* for *Vata vyadhi* includes *Sneha, Sveda, Samshodana, Agnikarma, Raktamokshana, Lepa, Basti* etc. (as stated above) **[4]**. *Basti Chikitsa* is considered as an *Ardha Chikitsa* (half line of treatment) and *Shrestha Chikitsa* for pacifying aggravated *Vata*. So, it is highly recommended and useful treatment in Vitiated *Vata* disorders. *Acharya Sushruta* explains the mode of action of *Basti* saying that, *Basti* given through rectal route gets absorbed and shows its effects all over the body just like the water gets absorbed through the roots and nourishes the whole plant **[9]**.

Transcutaneous electrical nerve stimulation (TENS) is used to alleviate the intensity of pain and involves the delivery of pulsed electrical currents across the skin to stimulate peripheral nerves. Physiological research demonstrates that TENS reduces activity and excitability of central projection neurons reducing nociceptive input to the brain and modulating pain experience **[10-13]**. There is moderate-quality evidence that manipulation and mobilization are likely to reduce pain and improve function for patients with chronic low back pain; manipulation appears to produce a larger effect than mobilization **[14]**. *Dashamoola* as the name suggests contains roots of ten different plants. Of these, five are known as *brihat panchamoola* and the remaining as *laghu panchamoola*. It can be used in the form of *kwath* or *arishta* . It is believed that the 10 ingredients in *Dashamoola* may be serving different roles like adjuvant, carrier agent and stabilizer etc. Some of these ingredients have been evaluated in experimental models of inflammation and pain and have shown to possess anti-inflammatory and analgesic activities **[15]**. *Yogaraja guggulu* a herbo-mineral preparation having *kaphavatahara* property. The main target area of the drug is *asthi majjagata vata*. As the drug which having *ushna* and *ruksha guna* which clears the *srothas* (channel) **[16]**. It is a herbomineral preparation containing *Sunthi, Pippali, Marica, Ajmoda or Yavani, Svetajiraka, Krishna jiraka,*

Suddha Hingu and Saindhava lavana. It is indicated in *Agnimandya* (Digestive impairment), *Shula* (Colicky Pain), *Gulma* (Abdominal lump) and *Vataroga* (Disease due to *Vata dosha*) **[17]**. Low back pain Clinical Guidelines recommend the non-pharmacological and non-invasive management. These include the provision of advice to stay active and the use of patient education and exercise therapy **[18]**. Guidelines regularly recommend the use of physical exercise for non-specific LBP **[19]**. The aim of physical treatments is to improve function, and to prevent disability from getting worse. In chronic low back pain, exercise therapy has become a first-line treatment and should be routinely used .If low back pain persists for more than 12 weeks, physical treatments that encompass a graded activity or exercise programs that focus on improvements in function, are recommended. In fact, in low back pain greater than 12 weeks, exercise is a first-line treatment that should be considered for routine use **[20]**. All recent clinical practice guidelines endorse exercise therapy in persistent low back pain **[21]**. Yet access to structured exercise programs remains erratic **[20]**.

CONCLUSION

The Adopted Ayurvedic and physiotherapy principles have given promising results in the management of *Katishoola. Reduction in the* parameters like *Ruja, Stambha, Suptata*, Range of motion, Oswestry Low Back Pain Disability questionnaire was seen at different time points. Further research in this direction with good sample size helps in the generation of evidence based results.

Informed consent - Informed consent regarding documentation and publication of the case was obtained from the patient.

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