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THE ROLE OF PARIJATA PATRA KASHAYA IN THE MANAGEMENT OF KATI SHOOLA AND JANU SANDHIGATA VATA: A CASE STUDY

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ABSTRACT

Musculo skeletal disorders are a huge medical burden globally; multimodal analgesia and surgical procedures are the options for treatment in contemporary science. In Ayurveda, *Acharya Charaka* stated in the context of *Anukta Vikara*, the vitiated *Vata* reaches a region, causes *Shoola* (~ pain), *Stambha* (~ stiffness), *Supti* (~ numbness), etc. in that particular region. *Kati shula* and *Janu Sandhigata Vata* are among such conditions which can be equated with musculoskeletal disorders. A 47-year-old female patient with low back ache and bilateral knee joint osteoarthritis was treated conservatively with fresh *Parijata Patra Kashaya*. During treatment, improvement was seen in the initial weeks. By the end of 10 weeks, the treatment protocol was found to be significantly effective in symptomatic and assessment profiles as in NRS scale, SLR, and Lumbar range of movement. Hence, in the initial stages of the condition, *Parijata Patra Kashaya* would be a better choice against multimodal analgesics.

Key words: *Kati Shoola*, *Janu Sandhigata Vata*, *Parijata Patra*, Low back ache, Osteo arthritis

INTRODUCTION

In a recent analysis of Global Burden of Disease, 2019 data showed that approximately 1.71 billion people globally live with musculoskeletal conditions, including low back pain, osteoarthritis, neck pain,

fractures, amputation, and rheumatoid arthritis. Low back pain is the main contributor to the overall burden of musculoskeletal conditions, with 570 million prevalent cases worldwide, responsible for 7.4% of global YLDs (years lived with disability), 528 million Osteoarthritis prevalent cases with 19 million YLDs[1]. It is the leading cause of physical activity hindrance and inefficient at the workplace and results in a huge medical burden and economic cost[2]. Low back pain symptoms can derive from many potential anatomic sources, such as nerve roots, muscle, fascial structures, bones, joints, intervertebral discs, and organs within the abdominal cavity[3]. Knee osteoarthritis, also known as degenerative joint disease of the knee, is typically the result of wear and tear and progressive loss of articular cartilage[4]. Multimodal analgesia and surgical procedures are the options for treatment in contemporary science[5].

Kati shula has not been described as a separate disease in *Brihattrayis*. Rather it has been mentioned in the context of *Anukta Vikara*, where *Acharya Charak* stated that the vitiated *Vata* reaches to which region, causes *Shoola* (~ pain), *Supti* (~ numbness), *Stambha* (~ stiffness), *etc*. in that region[6]. *Bhava Prakasha* had explained as *Trika Shoola* in the context of *Vata Vyadhi*[7], and it is deliberated as one of the *Vataja Nanatmaja Vikaras* by *Acharya Sharangadhara*[8].

Sandhivata is first described by *Acharya Charaka* as *Sandhigata Anila* with symptoms of *Shotha* (~ swelling), *Vatapurnadratisparsha* (~ on palpation feels like a bag filled with air), and *Prasarana akunchan pravritisavedana* (~ pain on flexion and extension of the joints)[9] direct explaination was seen in Ayurveda classics. Ayurveda literature has a treasure of herbal drugs which are used to treat ailments; *Chakradatta* is one of the important treatises, where fresh *Parijata Patra Kashaya* / *Shephalika Patra Kashaya* usage in the context of *Vata Vyadhi* has been mentioned[10]. *Parijata* has high medicinal value in *Ayurveda*. It has *Katu and Tikta Rasa, Ruksha Guna, Ushna Veerya, and* act as *Vatahara*[11]. Nyctanthes arbor-tristis Linn. of the Oleaceae family are shrubs or small trees with soft white hairs, young branches sharply quadrangular. Leaves are opposite, ovate, and rough with short, stiff hairs. Inflorescence is axillary or in terminal cymes. The flowers have a pleasant fragrance, with a five to eight-lobed white corolla with an orange-red centre. The popular medicinal use of this plant is anti-inflammatory, anti-pyretic, anti-helminthic, anti-leishmanisis, etc. Many experimental studies have proven these pharmacological actions[12].

Case report

A 47-year-old female patient was visited on 27/04/22 to the OPD with Reg no.30620 for a chief complaint of pain in the lower back region along with mild stiffness for 1 year, and the symptoms got aggravated for 15 days. Pain in the B/L knee joint, more in the right knee joint with a history of 3 ½ years, and the symptoms got aggravated since 1 month. There was no history of falls or injury. Pulse - 84/min, Blood Pressure - 120/70 mm of Hg, Temperature - 97.6^0 F, Respiratory rate - 18/min. Systemic examination did not show any specific abnormality. There is no significant past or family history. Personal history: Bowel habits – regular, once a day. Sleep – mildly disturbed, Diet – vegetarian, micturition – 6 -7 times/ day, appetite – good. On local examination, tenderness was present over the L4-L5-S1 region, SLR was positive at 50^0 in the right leg and 55^0 in the left leg, and B/L knee joint- crepitus was present; swelling and redness were absent at the time of evaluation.

Treatment protocol:

The patient was treated on OPD basis during the course of medication after getting informed consent from the patient. Fresh *Parijata Patra* collected from the herbal garden of SSCASR, Bangalore, and authenticated by the Taxonomist. The patient was trained to prepare *Kashaya* from freshly collected *Parijata Patra*, which was supplied on a regular basis to the patient, and was advised to take 40ml of freshly prepared *Kashaya* thrice a day before food for a period of 10 weeks.

Assessment criteria:

1. The patient was assessed on both subjective and objective assessment parameters. Subjective assessment was done for both *Kati shoola* and *Janu Sandhigata Vata* on the basis of the Numerical rating scale (NRS)[13] to assess pain [Figure1] and the Functional

disability scale for *Kati shoola*[14][Table 1]. For an objective assessment of *Kati shoola*, SLR of both legs and lumbar range of motion are used[15] and *Janu Sandhigata Vata* is assessed based on Knee joint crepitation[16].

Figure 1: Numerical rating scale

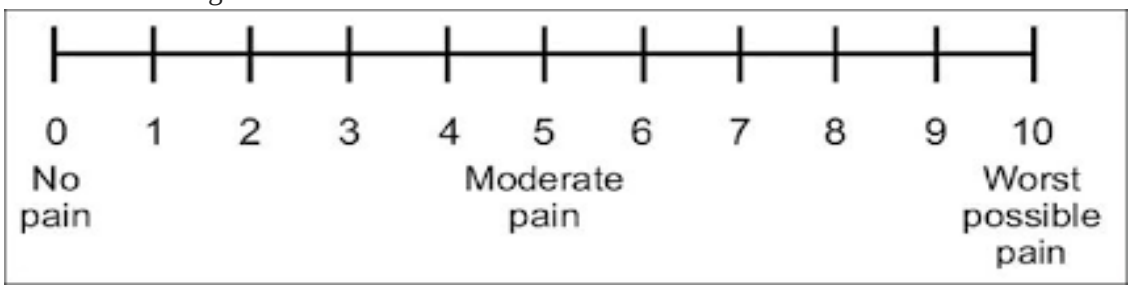

Table 1: Functional disability scale

Score 0	Pain-free full activity
Score 1	Perform independently with pain
Score 2	Perform with minimal assistance
Score 3	Perform with maximum assistance
Score 4	Unable to perform

Outcome:

Before starting oral administration of *Parijata Patra Kashaya*, NRS score for *Kati shoola*, before treatment was 6 and after treatment was 1, and the Functional disability score for *Kati shoola* was improved from 1 to 0 after the treatment [Table 2]. SLR was improved from 50^0 in the right leg, and 55^0 in the left leg to 80^0 and 85^0, respectively, and the range of movement in the lumbar region was increased [Table 3]. A numerical rating scale for *Janu Sandhigata Vata* was improved from 4 to 1 after treatment [Table 4], but no change in the knee joint crepitation was observed [Table 5]. No untoward effects were noticed, but appetite got increased during the course of medication. After 15 days, the patient came for follow-up, and no relapse of symptoms were noticed.

Table 2: Subjective criteria before and after treatment in Kati Shula

SN	Subjective criteria	Before treatment	After treatment
1	NRS scale to assess pain	6	1
2	Functional Disability scale	1	0

Table 3: Objective criteria before and after treatment in Kati Shula

SN	Objective criteria	Before treatment	After treatment
1	SLR	Rt leg – 50^0 Lt leg – 55^0	Rt leg – 80^0 Lt leg– 85^0
2	Flexion of lumbar spine	80^0	110^0
3	Extension of lumbar spine	20^0	35^0

Table 4: Subjective criteria before and after treatment in Janu Sandhigata Vata

SN	Subjective criteria	Before treatment score	After treatment score
1	NRS scale to assess pain	4	1

Table 5: Objective criteria before and after treatment in Janu Sandhigata Vata

SN	Objective criteria	Before treatment score	After treatment score
1	Crepitation of both knee joints	+	+

DISCUSSION

As *Kati* and *Janu Pradesha* are the *Sthanas* for *Vata Dosha, Kati shoola* and *Janu Sandhigata Vata* are the *Vata Dosha Pradhana Vyadhis*. In the present case, since the patient is in her late 40s, the prevalence of *Vata Vyadhi* would be more. An apt drug in this condition should pacify *Vata Dosha* and, in turn, reduce the symptoms should be chosen. *Parijata* is one such drug having that potential. It has *Tikta* and *Katu Rasa, Ruksha Guna, Ushna Veerya*, and having *Vatahara Doshaghnata*. It has *Vataari* as one of its synonyms, which means one which brings down the vitiated *Vata Dosha* to its normalcy. *Kati Shoola* and *Janu Sandhigata Vata* are the conditions where *Vata Dosha* gets aggravated due to *Dhatu Kshaya* and *Marga Avarna* [17]. *Ushna Veerya* present in the drug is the first choice of Guna in these conditions, which helps in bringing down the aggravated *Vata Dosha*[12]. Many experimental studies have proven the anti-inflammatory, anti-arthritic pharmacological action of the *Parijata*[11]. Leaves of *Nyctanthes arbor-tristis* Linn. contain the flavanol glycosides, D-mannitol, β-sitosterol, Astragaline, Nicotiflorin, Oleanolic acid, Nyctanthic acid, Ascorbic acid and Tannic acid[18], among which an experimental animal study of flavanol glycosides is proved to possess an effective anti-inflammatory action[19], Oleanolic acid exert beneficial effects on bone remodelling by inhibiting osteoclast activity and enhancing osteoblast activity[20] and β-sitosterol, a potent phytosterol has showed a promising effect in osteoporosis by protecting osteoblasts and suppressing osteoclastogenesis[21]. Hence these are some of the known phytochemicals present in *Nyctanthes arbor-tristis* that might have helped in the present case.

CONCLUSION

Parijata Patra Kashaya showed a promising result in the management of *Janu Sandhigata Vata* and *Kati shoola*. It is abundantly cultivated in most parts of the country, so there would be no hurdle in getting the genuine drug. It can be used in the initial stages of the condition and would be a better choice against multimodal analgesics. Though the promising result is seen, further studies are required in a larger sample size for stronger evidence.

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