



Original Article

AYURVEDIC MANAGEMENT OF OSTEOARTHRITIS (JANU SANDHIGATA VATA): A CASE REPORT

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Abstract

A 53 year old female patient of *Janu Sandhigata Vata* came to hospital with complaints of bilateral knee joint pain, difficulty in walking with swelling, crackle sounds of the joints and restricted movement since 2 years. Patient was treated as indoor patient for 16 days with internal medicine including *Laksha Guggulu* and *Matra Vasti* of *Panchtikta Guggulu Ghrita* along with *Snehana* and *Swedana*. Patient responded to Ayurvedic treatment. After the treatment patient felt improvement.

Keywords: *Sandhigata Vata*, osteoarthritis, *Matra Vasti*, *Snehana*, *Swedana*.

INTRODUCTION

Clinically the description of *Sandhigata Vata* explained in the classical texts is similar to the condition Osteoarthritis in modern science. In old age, all *Dhatus* undergo *Kshaya* (degeneration), Thus leading to *Vataprakopa* and making individual prone to many diseases. Among them *Sandhigata Vata* stands top in the list. *Sandhigata Vata* is one of such disease, which needs a specific target of therapeutic intervention to check or slow down the process of “*Dhatu Kshaya*” and to pacify *Vata*. It limits everyday activities such as walking, dressing, bathing etc., thus making individual handicapped.

Dosh Dushya Sammurchhana takes place which leads to destructive changes in *Asthi* and diminish of *Shleshaka Kapha*, further leading to appearance of symptoms of *Sandhigatavata* like on palpation revealed as air filled bag (*Vatapurnadritisparsha*) and pain during flexion and extension (*Akunchana Prasarana Pravriti Savedana*).

We can correlate *Sandhigata Vata* with osteoarthritis (OA) on the basis of clinical features. OA is defined as a chronic joint disorder with progressive softening and disintegration of articular cartilage and bone at joint margin called osteophytes and capsular fibrosis. Osteoarthritis (OA) is a degenerative non-inflammatory joint disease that results in pain and restricted movement of affected joints. It is a condition involving the breakdown of the protective cushion of the cartilage covering the ends of the bones where two bones meet to form a joint. OA is accompanied by increasing thickness and sclerosis of the subchondral bony plate, by outgrowth of osteophytes at the joint margin, by stretching of the articular capsule, by mild synovitis in many affected joint and by weakness of muscles bridging the joint.

Community survey data in rural and urban areas of India show the prevalence of OA to be in the range of 17%- 60.6%¹. Osteoarthritis is the single most common cause of disability in older adult. The Global Burden of Disease Study reports that the burden of musculoskeletal disorders is much larger than estimated in previous assessments and accounts for 6.8% of DALYs worldwide².

In present clinical trial we used *Matra Vasti* of *Panchtikta Guggulu Ghrita* with *Snehana* and *Swedana* for 16 days in a Group. In another Group we use *Laksha Guggulu*. *Acharya Vagbhatta* mentioned *Panchtikta Guggulu Ghrita* in *Vatavyadhichikitsaprakarana* which is effective in *Sandhi*, *Asthi*, and *Majjagata Vata*³. In *Bhaishajya Ratnavali*, *Laksha Guggulu* mentioned in *Bhagna Rogadhikara*⁴.

CASE REPORT

A 53 year old female patient OPD No.113585, IPD No. 23145 and Bed no. 131 presenting with following complaints was admitted in our hospital on 2nd September 2019 for 16 days and discharged on 18th September 2019.

Patient was suffering with bilateral knee joint pain along with swelling since 2 years. She is a housewife and has the history of long standing also patient is overweight too. Initially she felt mild pain, which later increased when she was use the stairs, her pain increased and noticed swelling around the joints.

She found mild crepitus while walking for long. Her daily activities like long standing, cleaning, washing clothes etc. made to increase the symptoms.

She consulted a doctor in army hospital and started taking some pain killers as per doctor's advice. This gave her only temporary relief. She also advised to take an X-ray of both knee joint in standing view by her doctor , which showed osteoarthritis of both knees.

STUDY CENTRE: Chaudhary Brahm Prakash Ayurved Charak Sansthan, Khara Dabar, New

Delhi.

ASHTA STHANA PAREEKSHA:

1. **NADI:** Vata Kapha, Pulse:- 76/minutes
2. **MOOTRAM:** 5-6 times / day
3. **MALAM:** 1 time
4. **SPARSHA:** normal
5. **DRIK:** normal
6. **JIHVA:** uncoated
7. **SABDA:** normal
8. **AKRITI:** normal

CLINICAL FINDINGS:

Subjective Finding:

Patient was having severe pain , restricted movement and swelling in both knee joint with swelling .

Objective Finding:

X-ray of both knee joints in standing view AP and Lateral view.

Blood report:

Hb%:- 13.2gm/dl RBS:-

5.78million/mm RA factor:-

Negative

Platelet Count:- 1.83lakh/mm³ ESR:-

100 mm/1st hour

S. uric acid:- 5.8mg/dl

Urine Routine: Normal

MATERIALS AND METHODS

Patient was admitted in IPD where she was treated with oral medication and internal treatment for 16 days.

Assessment criteria:-

Scoring pattern was adopted to assess the relief in each symptom as follows-

1. **Pain in knee joints:-**

Table no.1:- Assessment of pain in knee joints-

Severity of Pain	Before Treatment		After Treatment	
	Rt. knee joint	Lt. knee joint	Rt. knee joint	Lt. knee Joint
Absent	0	0	0	0
Mild	1	1	1	1
Moderate	2	2	2	2
Severe	3	3	3	3

2. Movement of knee joints:-

Table no.2:- Assessment criteria for movement of knee joints-

Severity of symptoms	Before Treatment		After Treatment	
	Rt. knee joint	Lt. knee joint	Rt.knee joint	Lt.knee joint
Free	0	0	0	0
Mildly restricted	1	1	1	1
Moderately restricted	2	2	2	2
Severely restricted	3	3	3	3

3. Swelling of the joint:-

Table no.3:- Assessment criteria for Swelling of the joint-

Severity of Swelling	Before Treatment		After Treatment	
	Rt. knee joint	Lt. knee joint	Rt.knee joint	Lt.knee joint
No swelling	0	0	0	0
Slight swelling	1	1	1	1
Moderate swelling	2	2	2	2
Severe swelling	3	3	3	3

4. 90 feet distance walked by patient with time duration (sec.):-

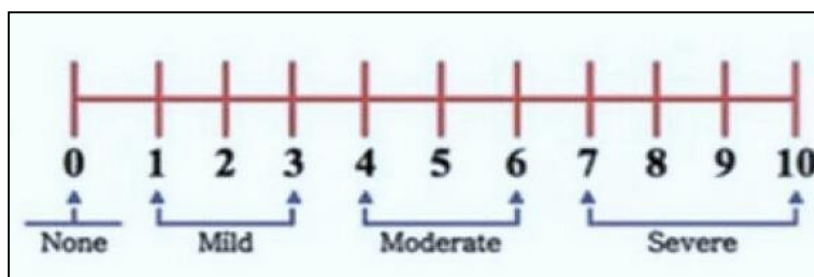
Table no. 4:- Assessment criteria for 90 feet distance walked by patient with time duration-

90 feet distance walked by patients	Time	
	Before Treatment	After Treatment
90 Feet		

☐ Pain scoring:-

Pain scoring was done on the basis of numerical pain score.

Numerical pain rating scale –



☐ Swelling scoring criteria :-

Table no. 5:- Showing parameters for swelling scoring

Grade	Description	Score
0	No edema	0
1	2mm or less: slight pitting, no visible distortion, disappears rapidly	1
2	2-4 mm indent: somewhat deeper pit, no disappears in 10-25 sec.	2
3	4-6mm: pit is noticeably deep. May last more than a minute. Dependent extremity looks swollen and fuller	3
4	6-8mm: pit is very deep. Lasts for 2-5 min. Dependent extremity is grossly distorted	4

☐ Movement of knee joint :-

Normal range of movement (ROM) at the knee is considered to be 0 degree to extension (completely straight knee joint) to 135 degree of flexion (fully bent knee joint).

Table no.6:- Showing grading of movement of knee joint.

Grade	Knee flexion by goniometer
0	Up to 130 flexion and above(normal)
1	Up to 120 flexion (mild)
2	Up to 100 flexion (moderate)

3	No improvement in knee flexion and above
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Drug and dosage:

Table no. 7. Showing drug and dosage given to patient.

S.N	Drugs	Dose	Route	Time	Anupana
1.	<i>Laksha Guggulu</i>	2tab TDS (250mg/tab)	Oral	Thrice a day	Luke warm water
2.	<i>Panchtikta Guggulu Ghrita</i>	50 ml <i>Matra Vasti</i>	Anal	Once a day	

- Duration : 16 days

1. *Panchtikta Guggulu Ghrita*⁵:-

Table no.8. Showing all ingredients with ratio used in formation of *Panchtikta Guggulu Ghrita*.

S.	Ingredients	Ratio used in drug
1	<i>Nimba</i>	1 Part
2	<i>Guduchi</i>	1 Part
3	<i>Vasa</i>	1 Part
4	<i>Patola</i>	1 Part
5	<i>Nidigdhika</i>	1 Part
6	<i>Guggulu</i>	1/2 Part
7	<i>Vidanga</i>	1/40 part
8	<i>Haridra</i>	1/40 part
9	<i>Pippali</i>	1/40 part
10	<i>Rasna</i>	1/40 part
11	<i>Vacha</i>	1/40 part
12	<i>Maricha</i>	1/40 part
13	<i>Arushkara</i>	1/40 part
14	<i>Ativisha</i>	1/40 part

15	<i>Manjishtha</i>	1/40 part
16	<i>Patha</i>	1/40 part
17	<i>Rohini</i>	1/40 part
18	<i>Yavani</i>	1/40 part
19	<i>Gajpippali</i>	1/40 part
20	<i>Kushtha</i>	1/40 part
21	<i>Chavya</i>	1/40 part
22	<i>Tejovati</i>	1/40 part
23	<i>Kutaja</i>	1/40 part
24	<i>Surdaru</i>	1/40 part

2. LAKSHA GUGGULU⁶:-

Table no. 9. Showing all ingredients with ratio used in formation of *Laksha Guggulu*.

S.	Ingredients	Ratio used in drug
1.	<i>Laksha</i>	1 Part
2.	<i>Asthisumhrta</i>	1 Part
3.	<i>Arjuna</i>	1 Part
4.	<i>Ashwagandha</i>	1 Part
5.	<i>Nagbala</i>	1 Part
6.	<i>Guggulu</i>	5 Part

Figure no. 1:- Picture of medicines used in this case study.



In *Vasti* we are saying patient to lie in the left lateral position. We give *Snehana* and *Swedana* on

back region with fingers. Then we slowly enter the *Vasti Netra* to anal region and press the medicine in the *Vasti Netra*. We take blood pressure before and after *Vasti*.

DIET: Patient was advised to take light diet before *Matra Vasti*. Special diet is not mentioned for *Sandhigata vata*. But as being a *Vata Vyadhi* we can adopt the same diet of the general *Vata Vyadhi*. Foods are recommended Vegetarian diet with less spicy and oily foods.

OBSERVATIONS:

Patient was treated with above treatment from 3rd September to 18th September.

Table no. 10:- Showing results before and after treatment.

Knee examination	Before treatment		After treatment	
	Rt. knee joint	Lt. knee joint	Rt. knee joint	Lt. knee joint
Pain	3	2	1	0
Movement	2	1	1	0
Swelling	1	0	0	0
90 feet distance walked by patient with time duration (sec.)	52 Sec.		45 sec.	

DISCUSSION:

In this study the scoring of assessment symptoms was noticeable in comparison of before and after treatment. There was improvement in symptoms and general condition of patient. According to severity Rt. Knee joint showed more severe symptoms as compare to Lt. Knee joint.

In Right side - it was observed that before treatment pain was scored 3 which improves and convert in 1 after treatment. In movement, grade 2 converts in grade 1 after treatment and swelling also improves from grade 1 to 0.

In Left side - it was observed that before treatment pain was scored 2 which improves and convert in 0 after treatment. In movement, grade 1 converts in grade 0 after treatment.

Before treatment patient was able to cover 90 feet distance without any difficulty in 52 sec. but after treatment patient covered this distance in 45sec.

Vata vitiates due to *Avarana* and *Vata Vardhaka Ahara*, *Vihara* leads to the aggravation of disease. In modern texts, it can be correlate to osteoarthritis. *Vyana Vayu* circulates in the body and controls motor function like flexion, and extension of musculoskeletal system. It prevails on *Sandhis* for its purpose. So *Sandhi* may be considered as the site of *Vyana Vaya*. Thus the *Vyana Vayu* has close relationship to *Shleshaka Kapha* because of its site in bones and *Sandhis*. *Shleshaka Kapha* is situated in *Sandhi* and its function is lubrication of *Sandhi* for smooth movement. It keeps the bones firmly united, protect their articulation, and oppose their separation as well as dislocation. So *Shleshaka Kapha* can be correlate with synovial fluid in modern concept because physical quality and function of *Shleshaka Kapha* is closely resembled to synovial fluid. Being present in *Asthi-Sandhi*, it nourishes, lubricates and protects them. *Shleshaka Kapha* have *Snigdha*, *Guru*, *Pichchila*, which are opposite to *Vata Vardhaka Ahara*, *Vihara* like *Ruksha & Laghu Aahara* etc. Ultimately qualitative and quantitative property of *Shleshaka Kapha* diminished and developing symptoms like crepitation in joint.

Probable mode of action of *Matra Vasti* of *Panchtikta Guggulu Ghrita*:-

As *Matra Vasti* is the form of *Sneha Vasti*, it simultaneously helps in pacification of *Vata Dosha* and nourishment of *Sleshaka Kapha* at the level of joint. As rectum has a rich blood and lymph supply so, the *Veerya* of *Vasti Dravya* first absorbs through intestinal mucosa and corrects the vitiation of *Apana Vayu*, *Samana Vayu* and then *Vyana Vayu*, then enters in general circulation and reaches at the site of pathology (corrects *Asthimajjavaha Srotodusti*) and gradually it helps in breaking the *Samprapti*.

Sandhigata vata is *Madhyama Roga Margagata Vatika* disorders in which vitiated *Vata* gets lodged in *Sandhi*. Hence to treat *Sandhigata Vata* drugs acting on both *Vata* and *Asthi* should be selected. According to *Charaka*, in *Asthi Dhatu Dushti* the treatment should be given *Tikta Dravya Ghrita* and *Kshir*⁷. *Panchatikta Guggulu Grita* fulfills all the criteria as mentioned by *Acharya Charaka* except that milk is not used in preparing this medicine. But on the other hand it contains *Guggulu* (*Commiphora mukul*) which enhance the efficacy of this medicine by its anti-inflammatory and *Srotoshodhaka* property.

Panchatikta Guggulu Ghrita have *Tikta Rasa*, *Ushna Virya*, *Madhura – Katu Vipaka* and *Snigdha Guna*. Due to *Tikta Rasa* it will remove obstruction in flow of nutrients in the body channels due to predominance of *Akasha Mahabhuta*. *Katu Vipaka* and *Ushna Virya* of ingredients will promote the *Dhatvagni* (Metabolic functions). *Madhura Vipaka* and *Snigdha Guna* of the

medicine will provide nutrition of all the *Dhatus* including *Asthi* and *Majja Dhatu* which will stabilize *Asthi Dhatu*, *Majja Dhatu* and ultimately compensate the *Asthi Dhatu* and *Majja Dhatu Kshaya*.

Tikta Rasa has got *Deepana*, *Pachana* and *Rochana* properties. So it helps in the improvement of the general condition of health and thus strengthens the whole body as well as joints. *Tikta Rasa* possess *Lekhana* property also⁸, therefore it helps in the weight reduction of the patients and reducing physical stress on weight bearing joints.

Ghrita is *Vata-pittashamaka*, *Balya*, *Agnivardhaka*, *Snigdha*, *Madhura*, *Saumya*, *Sheeta Virya*, *Shulahara*, *Jwarahara*, *Vrishya* and *Vayahsthapaka*⁹. Thus, it pacifies *Vata*, improves the general condition of the body and acts as a rejuvenator of the body. Thus, helps in the *Samprapti Vighatana* of the *Sandhigata Vata*. *Ghrita* also contains vitamin D and facilitate the absorption of fat soluble vitamins including vitamin D which plays an important role to utilize calcium and phosphorous in blood and bone building¹⁰

Ghee is rich in Antioxidants including Vitamin A, Vitamin E and carotenoids which may be helpful in preventing lipid peroxidation¹¹.

Probable mode of action of Laksha Guggulu:-

The content of *Laksha Guggulu* include purified *Guggulu*, *Laksha*, *Asthisanharaka*, *Arjun*, *Ashwagandha* and *Nagbala*, most of these drugs have properties like – *Vatakapahanashaka*, *Deepana*, *Balya*, *Rasayan*, *Tridoshanashaka*, *Pachana*, *Shothaghna*, *Vednashamaka* and *Shoolaprashamaka*. A compound preparation having these properties is likely to check the etiopathogenesis of the disease *Sandhigataavata* and arrest its progress.

Guggulu:- *Guggulu* presents in both drugs which were used in treatment. It is well known for its *Vata* pacifying, anti-inflammatory and *Lekhana* effect. Due to its *Ruksha*, *Tikshana* and *Vishada Guna* it acts as a *Medohara*. According to *Sushruta*, *Purana Guggulu* has got *Apakarshan* property¹², which helps in removing the obstruction in flow of *Rasa* and *Rakta Dhatu* by cleaning the body channels thus facilitate proper supply of oxygen and nutrition to the affected joint and removal of endogenous waste products from the joint area. It also reduces the body weight resulting in reduction in physical stress on weight bearing joints. Due to its *Katu Rasa* and *Ushna Virya* it acts as a *Deepana*, therefore improves the metabolic functions thus helps in the improvement of general condition of the patient. *Guggulu* also acts as a *Rasayana* thus promotes regeneration of damaged tissue and prevents further degeneration. Pharmacologically *Guggulu* has got the properties of anti-

inflammatory, immunomodulatory and anti-lipidaemic action.

CONCLUSION:

In this study, we can conclude that the use of *Matra Vasti* of *Panchtikta Guggulu Ghrita* along with *Laksha Guggulu* is very effective in *Sandhigata Vata*. This treatment reduces the pain, swelling in knee joint and helps in free movement of knee joint. Patient also able to walk for long distance without pain after treatment.

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