

EFFICACY OF AJMODADI VATI IN THE MANAGEMENT OF JANU SANDHIGATA VATA (OSTEOARTHRITIS OF KNEE JOINT)

Bhattacharjya J. K. Ghodela Naresh kumar Baslingappa K Swapna B. Verma J. P.
Department of Shalya Tantra, National Institute of Ayurveda, Jaipur, Rajasthan, India

ABSTRACT

Osteoarthritis also known as degenerative joint disease is a group of mechanical abnormalities involving degradation of joints, including Articular cartilage. Symptoms may include joint pain, tenderness, stiffness, locking, and sometimes an effusion. In *Ayurveda* the Osteoarthritis are approximately similar to *Janu Sandhigata Vata* in *Sushrut Samhita*. The complete remedy of these diseases is still not available in modern medicine. The drugs used mainly are analgesic, anti-inflammatory and steroids, which can't spell out the disease but are only symptomatic, on the other hand furious side effects. In present study a humble effort is done on 30 clinically diagnosed cases of *Janu sandhigata vata* were registered. All patients were treated with *Ajmodadi Vati*, after therapy the statistical analysis conclude that *Ajmodadi vati* shows the significant result.

Keywords: *Janu sandhigata vata, Ajmodadi Vati, Osteoarthritis*

INTRODUCTION

Osteoarthritis is the most common joint disease of human. Among the elderly knee Osteoarthritis is leading cause of chronic disability in developed countries¹. It is a group of mechanical abnormalities involving degradation of joints², including Articular cartilage and subchondral bone. Symptoms may include joint pain, tenderness, stiffness, locking and sometimes an effusion. A variety of causes viz. hereditary, developmental, metabolic, and mechanical may initiate processes leading to loss of cartilage. When bone surfaces become less well protected by cartilage, bone may be exposed and damaged. As a result of decreased movement secondary to pain, regional muscles may atrophy, and ligaments may become more lax.³ In *Ayurveda* the symptom of Osteoarthritis are approximately similar to *Janu Sandhigata Vata* in.⁴ The complete remedy of these diseases is still not available in modern

medicine. The drugs used mainly are analgesic, anti-inflammatory and steroids, which can't spell out the disease but are only symptomatic, on the other hand furious side effect like Gastritis, Ulceration of mucosal layer of stomach, heart burn and Vomiting are added as the unwanted results. *Ajmodadi Vati*⁵, indicated in *Vata vyadhi* was hence evaluated for its efficacy in *Janu sandhigata vata*.

AIMS AND OBJECTIVES

To evaluate the efficacy of *Ajmodadi Vati* in the management of *Janu sandhigata vata* (Primary Osteoarthritis of Knee joint)

MATERIAL AND METHODS

1. Selection of the patients: Clinically diagnosed 30 patients of *Janu Sandhigata Vata* (Primary OA of Knee joint) were selected from O.P.D. / I.P.D. Department of *Shalya Tantra* N.I.A., Jaipur. All the patients were treated with *Ajmodadi vati*.
2. Inclusion Criteria

- Patients of *Janu Sandhigat Vata* (Primary O.A.).
 - Patients above the age of 40 years of any sex, religion.
3. Exclusion Criteria
- Below 40 years age.
 - Secondary Osteoarthritis of knee joint.
 - Rheumatoid arthritis & Gouty arthritis.
 - Diabetes mellitus.
 - Any systemic disorders which interfere with the treatment.
4. Selection of Drug: Selected drug for study, *Ajmodadi Vati* is mentioned in *Yoga Ratnakar* for the *Sandhi Vata Chikitsa* for oral administration.
5. Preparation of Drug: *Ajmodadi Vati* was prepared in the pharmacy of N.I.A. Jaipur, under close supervision of the experts.
6. Administration of Drug: 10 g/day into three divided doses with luke warm water as *Anupana*.
7. Duration of treatment: Duration of the trial was 4 weeks and patients were followed up every 7th day up to one month after completion of trial. To see the recurrence or any type of deterioration associated with *Janu Sandhigata Vata*.
8. Assessment Criteria: The symptoms of Osteoarthritis of knee joint and joint activity were taken for the assessment results of clinical trial. Following parameters were taken in account.

Grading of assessment criteria:

A. Severity of pain (VAS scale)⁶

- No pain: 0
- Mild pain (up to 3mark): 1
- Moderate pain (up to 4-6 marks): 2
- Severe pain (up to 7-8 marks): 3

- Intolerable pain (up to 9-10 marks): 4
- B. Tenderness
- No pain on pressure: 0
 - Painful on pressure: 1
 - Winces with pain: 2
 - Winces and withdraws affected parts: 3
 - Not allowed to touch the part: 4
- C. Swelling: Assessed on following grading system.⁷
- No Swelling: 0
 - Swelling may not be apparent on casual inspection, but recognizable to an experienced examiner: 1
 - Swelling obvious even on casual observation: 2
 - Markedly abnormal swelling: 3
 - Swelling to a maximally abnormal degree: 4
- D. Walking distance: Assessed on following grading system.
- Walks without pain up to 1km: 0
 - Walks without pain up to 500 meters: 1
 - Walks without pain up to 250 meters: 2
 - Feels pain on standing: 3
 - Cannot stand: 4
- E. Range of motion (R.O.M.) (By Goniometer): Assessed on following grading system.
- 0-130 degree: 0
 - 129-90 degree: 1
 - 89-60 degree: 2
 - 59-30 degree: 3
 - 30-0 degree: 4

Assessment criteria other than VAS for pain assessment has been designed by the research team in accordance to the features of various sign symptoms of *Janu sandhigata Vata* as mentioned in the *Charka Samhita*.

OBSERVATIONS AND RESULTS

Table 1: Overall effect on the assessment criteria

Sl No.	Assessment Criteria's	Mean Score		Relief %	S.D.	S.E	W	p	Result
		B.T	A.T						
1	Severity of pain	2.9	1.4	48.27	0.5164	0.1633	55.00	<0.002	HS
2	Tenderness on palpation	2.8	1.4	50.00	0.5164	0.1633	55.00	<0.005	HS
3	Swelling	2.1	1.4	33.33	0.4830	0.1528	28.00	<0.01	S
4	Walking distance	2.3	1.7	26.09	0.5164	0.1633	21.00	<0.05	S
5	Range of motion	2.4	1.8	25.00	0.5164	0.1633	21.00	<0.05	S

Table 2: Relief of Symptoms (%)

Sl. No.	Parameters	Relief %
1.	Pain	48.27
2.	Tenderness	50.00
3.	Swelling	33.33
4.	Walking distance	26.09
5.	Range of motion	25.00

Follow up:

After completion of trial approx 60 % patients have no recurrence during month of follow up period, recurrence of symptoms observed in about 40 % of the patients i.e 40% patients develops symptoms again.

DISCUSSION

Age: Maximum patients 43.33% were found in age groups of 51 to 60 years followed by 23.33 % patients from 40 to 50 years of age group and 13.33% patient were come more than 70 yrs. This study shows that this disease is more prevalent in age group 51 to 60 years. At this age group Vata is more predominant; this takes pivot role for Dhatu ksaya and manifest as a Sandhigata Vata. This supports the literature about risk factor of OA. (Harrison's internal medicine 17th edition 2008)

Gender: In study 33.33 % patients were male and followed by females 67.67%. The disease Osteoarthritis is most common in women .The probable cause of this finding may be.

- Females are more obese in comparison to males and obesity is a precipitating

factor for the development of OA of the knee joint.

- Radiographic evidence of knee joint OA especially symptomatic OA of knee joint appear to be more common in women then man, this support the literature. (after Hochberg M.J.Rheumato, 18:1438,1991)

Occupation: Maximum patients 60 % were house wife followed by 13.33 % Govt. job, 10% in farmer, 06.67% business men, 06.67% retired and 03.33% laborer group. The data shows that those are more exposure to occupational stress, faulty sitting posture and prolonged squatting or kneeling responsible for OA of knee joints. This support the literature about risk factor of OA (Harrison's internal medicine 17th edition 2008)

Socio Economic Status: Janu Sandhigata Vata is more in Middle Socio-Economic Status (60%), followed by lower (30%) and Higher (10%) probably due to more physical work and faulty dietary habit. The probable cause of this finding may be-

- The area has mostly the middle classes.
- In this group people are more depressed, feelings of helplessness, trouble participating in every day personal and

family joys and responsibilities is more which affect the articular cartilage which leads to development of *Janu Sandhigata Vata* (OA).

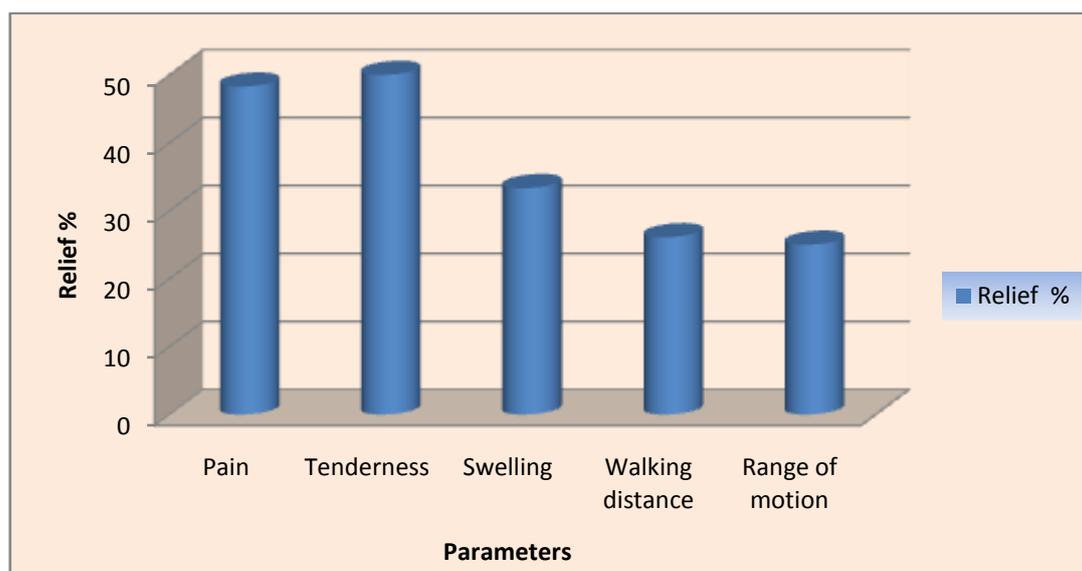
So the data indicate that habits and nutrition may play supportive role in manifestation of *Janu Sandhigata Vata*.

Assessment Parameters: After 4th weeks of treatment the result showed clinical improvement, which was 48.27 % relief in pain, 50.00 % relief in tenderness, 33.33 % relief in swelling, improvement in walking distance by 26.09 % and range of motion was found 25 %. These results show that *Ajmodadi vati* has anti inflammatory properties that reduce pain, tenderness and swelling. By analyzing the above observations and results it is clear that *Ajmodadi*

vati shown the effective management of *Janu Sandhigata Vata*.

Mode of Action of Ajmodadi Vati: In *Ajmodadi vati*, the contents are *Ajmoda, Vidanga, Sunthi* etc. are having property of *Deepana, Pachana, Ushna, Tikshna guna* and *Vatanulomana, Ama pachana, Ajmoda* with *Tikshna, Ushna guna* it becomes *Sukshma Srotogamini*.

So the *Ajmodadi vati* have the potent pharmacological action on the *Janu Sandhigata vata* (O.A), the effect of the drug can be further justified on analyzing the result of clinical trial. *Vata* has the properties like *ruksha, laghu, sheeta, sukshma, chala, Vishada, khara* etc. when these *vata* properties vitiated in the body they cause symptoms of *Sandhigata Vata*.



Graph 1: Showing the Relief of Symptoms (%) of 30 patients of *Janu Sandhigata Vata*.

CONCLUSION

Following conclusions were drawn on the basis of present clinical trial: *Janu Sandhigata Vata* is common often 4th and 5th decade of life. *Janu Sandhigata Vata* is more common in the females than the males. Present study indicates that some relevant incidence of Family History was found in present study as only 13.34% of patients had family member suffering from *Janu Sandhigata*

Vata. The present study on the basis of statistical analysis concluded that *Ajmodadi Vati* safe and reliable in the management of *Janu Sandhigata Vata* (Primary O.A. of knee Joint).

REFERENCES

1. Centres for Disease Control and Prevention (CDC) (February 2001). "Prevalence of disabilities and associated health Conditions among adults—United States,

1999". *MMWR Morb Mortal Wkly Rep.* 50 (7):120–5. PMID11393491 (<http://www.ncbi.nlm.nih.gov/pubmed/11393491>)

2. "Osteoarthritis(http://web.archive.org/web/20090616022448/http://www.merck-source.com/pp/us/cns/cns_hl_dorlands_split.jsp?pg=/ppdocs/us/common/dorlands/dorland/six/000076356.htm) "at *Dorland's Medical Dictionary*

3. *a b* Conaghan, Phillip. "Osteoarthritis—National clinical guideline for care and management in adults"(<http://www.nice.org.uk/nicemedia/pdf/CG059FullGuideline.pdf>). <http://www.nice.org.uk/nicemedia/pdf/CG059FullGuideline.pdf>. Retrieved 2008-04-29.

4. Kaviraj Ambika dutta Shastri, Sushrut Samhita Edited by Reprint Edition 2006, Chukhambha Bhartiya Academy, Varanasi. Chapt.1/28.

5. Yog Ratnakar-1st edition 1988, by Dr, Indradev Tripathi and Dr. D.S. Tripathi, Publisher-Krishnadas Academy, Varanasi. *vatvyadhi chikitsa* 358/360

6. U.-D. Reips and F. Funke (2008) Interval level measurement with visual analogue scales in Internet-based research: VAS Generator. Doi:10.3758/BRM.40.3.699

7. <http://www.meddean.luc.edu/lumen/MedEd/medicine/pdx1/muscle/handout.htm>.

8. A Concise Textbook of Surgery, Sixth edition July 2010, Dr. S Das, Published by Dr. S Das, Calcutta.

9. Anatomy in Ayurveda - Part 1, By G V Purohit, Published by Dr. K.S. Mhaskar, Mumbai. 1955.

10. Arthritis and Allied Conditions-3rd edition 1986, by Vaidya Lalchand shastri, publisher-Vaidyanath Ayurved Bhawan.

11. Bailey and Love's Short practice of surgery, Twenty Third edition and second reprint – 1994, Revised by Charles V, Mann MA, Mch, FRCS (Eng.), R.G.G.

Russell MS, FRCS, with 37 specialist contributors.

12. Essentials of Medical Pharmacology - 3rd edition, by K.D. Tripathi, Publisher-Jaypee Brothers, New Delhi

13. Methods in Bio-statistics for medical students and research workers. By Mr. B K Mahajan, Published by Jitendra P Vijaypee brothers, Medical publishers (Pvt.) Ltd. 7th edition 2010.

14. Database on Medicinal Plants used in Ayurveda-Central council for Research in Ayurveda & Siddha, New Delhi.

CORRESPONDING AUTHOR

Dr. Jitendra Kumar Bhattacharjya

PG Scholar

Department of Shalya Tantra

N.I.A., Jaipur-302002, Rajasthan, India

Email: dr.jbhattacharjya@gmail.com

Source of support: Nil

Conflict of interest: None Declared