

AYURVEDIC MANAGEMENT OF OSTEO-ARTHRITIS: A CASE REPORT

Dr. Sharman Prasad Verma¹, Dr. Jinesh Kumar Jain², Dr. L.M. Kushwaha³, Dr. O.P. Dwivedi⁴,
Dr. Swapnil Singhai⁵

1. Deputy Director, Government of AYUSH, Bhopal, Madhya Pradesh
2. Associate Professor & Head, Department of Panchakarma, Government Ayurvedic College & Hospital, Nipania, Rewa, M.P.
3. Retried Professor, Department of Kayachikitsa, Government Ayurvedic College & Hospital, Nipania, Rewa, M.P.
4. Professor & Head, Department of Sharir Rachana, Government Ayurvedic College & Hospital, Nipania, Rewa, M.P.
5. Principal cum Medical Superintendent, Poornayu Ayurved Chikitsalaya evam Anusandhan Vidyapeeth, Tilwara, Jabalpur M.P.

ABSTRACT

Osteoarthritis of knee joint is the leading cause of chronic disability in developed countries. Some of them are unable to walk independently. It has been stated by Davidson that it is a degenerative joint disease characterized by degeneration of articular cartilage and simultaneous proliferation of new bone, cartilage and connective tissue. Some inflammatory changes are also there. He further mentioned that 80% of people above the age of 65 have radiographic changes but only 25% have the symptoms. Modern concept of the treatment is of the opinion that there are irreversible changes of Osteoarthritis. Treatment is directed towards relieving symptoms, maintaining and improving joint functions. More often non-narcotic analgesics are prescribed. Some patients have relief by taking non-steroidal anti-inflammatory drugs. However, there is a risk of gastric erosion. Sometimes prostaglandin synthetase inhibitors are also given but there is a possibility of impaired renal function. An occasional intra articular injection temporarily relieves the pain. Intra articular injections of corticosteroids may be helpful. Considering the foregoing concept of Osteoarthritis in modern medicine, relief from pain is there but patient has to face hazardous complications of drug. Therefore, patient in the present era are opting for successful Ayurvedic treatment. Ayurveda has its own concepts of treatment. This patient of Sandhivata was treated with Abhyanga, Swedana and oral herbal drug. This case study aims to summarize the presentation, examination, work up, and Ayurvedic management of the patient with Osteoarthritis.

Keywords: Sandhivata, Osteo-arthritis, Sidhartak Taila, Saindhavadi taila Janu Basti, Suranjan churna.

INTRODUCTION

Ayurveda has adopted the concept of total health which is related to the unique multi-dimensional concept of human life. It is a state of well-being referred to physical, censorial, mental and spiritual well-being. A living being which is termed as Purusha in Ayurveda is a composite entity, consisting of physical body, superadded with highly sensitive apparatus such as different Indriya, Mana and Atma. Ayurveda has holistic approach for maintaining the health.

Sandhivata is one of the Vataj disorder, in which patient has to face difficulties to carry on his routine life. Ayurveda has its own concepts of treatment. Sandhivata is considered to be one of the Vataj disorder amongst 80 types. Vitiated Vata when lodges in the joints, disease is produced. It has been considered by Acharya Charaka, Sushruta and Vagbhata that vitiation of Vata takes place most often in old age.

There is no specific treatment to prevent this disease process. Though, osteoarthritis does not cause any immediate mortality but it is one of the major causes of disabilities of the people affecting their day to day activity. Sandhivata is Kashtasadhya, according to Ayurveda, since Sandhivata grows in Madhyama Rogamarga. Furthermore, Vatavyadhi, which occurs as a result of the vitiation of Asthi and Majja, is difficult to cure. Ayurvedic disease control in general can be broadly divided into Shodhana and Shamana therapies. Samshodhan is a radical cure of the disease and is intended to eradicate or replace the vitiated Doshas, thus totally avoiding or curing the disease. Shamana is conservative or palliative in fact. In this treatment, attempts are made to get Tridosha and ManasaDosh into a state of balance.

Panchakarma has a full therapy role as a Promotive, Preventive, Curative & Rehabilitative procedure. Acharya Charaka has said that the doshas controlled by Samshamana are having the possibility of re-provocation while there is no such probability in case of the control of the doshas by Samshodhana. (Ch.Su.

16/20.) The patients suffering from Sandhivata are treated with Abhyanga, Swedana and different drugs. Acharya Charaka has mentioned to treat the patients of Sandhivata with the help of repeated Abhyanga and Swedana. Snehana and Swedana are considered to be the prime modalities of Chikitsa in Vata Vyadhi. JanuBasti being an innovative procedure evolved from Shirobasti has been studied with various Sneha Yogas to conclude remarkable efficacy in the condition of Sandhivata. In this case study, attempt was made to study the role of Saindhavadi Taila Janu Basti in Sandhivata and Sidhartak taila, Suranjan churna as oral medication in Sandhivata. If the study could provide better efficacy it can render a primary contribution to the treatment of Osteo-arthritis.

CASE STUDY

This is the case report of a 58-year-old male farmer who was diagnosed with knee joint osteoarthritis seven years ago. He and his family live in a mud house in the village. He couldn't function because of his joint discomfort, and he mentioned feeling so depressed that he didn't want to go out and associate with his companions. The only thing he had the opportunity to do was lay in bed most of the day, and that didn't make things any better. He spent much of his days in bed for a long period of time, which used to exacerbate his symptoms.

He had serious difficulties with the following tasks: standing for a long time, walking and sitting for a long time. He feels tired when he's up, and he's numb on both legs. Prior to osteoarthritis, he stated that he had an active lifestyle, workout daily and travelled frequently, however due to weight gain, the patient became frail and a condition in the form of joint pain, weakness, and swelling began to interfere with his quality of life.

The patient had no other major neurological problems, but had a history of hypertension, anxiety, and depression. Occasionally, he consumes beer and smokes daily. Surgical history was non-contributory. Several admissions to Allopathic Hospital were needed due to chronic acute joint pain and stiffness, with various mobility restrictions. Previously, joint replacement surgery had been proposed but had also been rejected. At present, and according to the patient himself, he is aware of the main factors in the treatment of osteoarthritis.

OBSERVATION, EXAMINATION, AND EVALUATION

Examination of Knee joint:

History: The common symptoms with which a patient generally presents are pain, swelling, stiffness, mechanical disorders (e.g. Locking, giving way, click etc.) and limp.

Inspection:

- Both the lower limbs were fully exposed
- Patient was first examined in the standing position, both from front and behind, secondly in the seated position, thirdly in the supine position and lastly in the prone position.
- Swelling
 - The limits of the swelling were clearly made out.
 - The gradings were allotted on the basis of criteria explained in the end of this section.
- Any deformities like genu valgum, genu varum etc. were examined.
- Joint instability or buckling of the joint was examined.
- Any abnormalities in the gait were examined.
- Any presence of muscular spasm was examined.
- Muscular wasting above and below the joint was examined.

Palpation:

- Local temperature was examined with the back of the hand and compared to that of the other side.
- Local tenderness was also examined.
- Swelling
- Fluctuation test was performed by pressing the supra patellar pouch with one hand and feeling the impulse with the thumb and the fingers of the other hand placed on either side of the patella or the ligamentum patellae.
- Patellar tap was elicited by pressing the supra patellar pouch with one hand driving the whole of its fluid into the joint proper as to float the patella in front of the joint. With the index finger of the other hand, the patella is pushed backwards towards the femoral condyles with a sharp and jerky movement. The patella can be felt to strike on the femur, which is known as the patellar tap.
- Palpation of popliteal fossa - -The patient was asked to lay down on the bench. The knee joint was flexed and the popliteal fossa was palpated.
- The knee joint, the popliteal artery, the areolar tissue, the veins and nerves, and the tendons in and around the popliteal fossa were all closely palpated to avoid any pathology here.

- Significance of click - If the click was associated with discomfort or pain, careful examination was done.
- Patello-femoral and femoro-tibial components were palpated for any tenderness or irregularity.

Movements: The motions allowed in the joint of the knee are primarily flexion and extension. Minor degrees of abduction, adduction and rotation may be enabled while the joint is partially flexed. Both aggressive and passive movements have been studied.

- Flexion & Extension: Normally, the knee can be flexed until the calf extended till the thigh and leg form a straight line.
- Abduction & adduction: These movements are virtually absent with knee straight, but slight degrees of abduction and adduction are possible when the knee is semi-flexed.
- Rotation: This movement is also not necessary if the leg is straight. When the hip and knee are bent to 90 degrees, a degree of rotation is necessary.

Auscultation: During active or passive movement, the palm of one hand was placed over the patella and crepitus was felt.

General Physical Examination:

Pulse - 84/min

Blood Pressure - 150/90mm of Hg

Weight - 79 kg

Height - 167 cm

Body mass index (BMI) - 22.6 kg/m²

Pallor - No pallor

Lymphadenopathy - No lymphadenopathy

Subjective and Objective Parameters

Sandhishoola (Joint Pain)

0 (Pain free)	–	No Pain (0mm)
1 (Very mild)	}	Mild Pain (10-30mm)
2 (Discomforting)		
3 (Tolerable)	}	Moderate Pain (40-60mm)
4 (Distressing)		
5 (Very Distressing)		
6 (Intense)	}	Severe Pain (70-100mm)
7 (Very Intense)		
8 (Utterly Horrible)		
9 (Excruciating unbearable)		
10 (Unimaginable/Unspeakable)		

Sandhi Stambha (Joint Stiffness)

- 0 - No Stiffness
- 1 - Mild Stiffness
- 2 - Moderate Stiffness
- 3 - Severe difficulty in walking due to Stiffness
- 4 - Severe Stiffness lasting 30 minutes

Objective Parameters (for Right & Left Knee joint)

1. Sandhi Shotha (Joint Swelling)

- 0 - No Swelling
- 1 - Swelling present

2. Sandhigati-asamarthatha (Restriction in Range of Joint movements)

- 0 - Normal flexion 135°
- 1 - Lesser than 135° more than 100°
- 2 - Lesser than 100° more than 75°
- 3 - Lesser than 75°

3. SandhiAtopa (Crepitus in joint)

- 0 - No Crepitus
- 1 - Palpable Crepitus
- 2 - Audible Crepitus

4. Sandhi Sparsha Akshamatva (Joint Tenderness)

- 0 - No Tenderness
- 1 - Complains Pain

- 2 - Complains pain with winces of face
- 3 - Patient winces the face and withdraws the part
- 4 - Does not allow touching the joint

For assessing above said parameters following tools were used-

- Visual Analogue Scale
- Measuring Tape
- Goniometer
- Weighing Scale

Laboratory investigation

- Hb% - 12.8gm%
- TLC – 6800/cu mm
- Neutrophils – 68%, Lymphocytes -25%, Monocytes – 5 %, Eosinophil – 2, Basophils – 0
- Platelet count – 164 k/uL
- Serum calcium – 7.6 mg%
- Vitamin D, 25 Hydroxy, Serum – 78.2 ng. mL
- Blood urea - 32 mg/dl
- Serum creatinine - 0.78 mg/dl
- Serum Uric Acid - 7.2 mg/dl
- Serum Alkaline Phosphatase – 103 U/L
- Total cholesterol- 215 mg/dl
- Triglycerides - 178 mg/dl
- HDL - 39 mg/d
- LDL - 166 mg/dl
- TSH – 3.1 ml U/L.
- HbA1C in blood: 5.6%
- FBS - 108 mg/dl.
- PPBS - 184 mg/dl.
- Urine sugar - Nil
- X-ray Knee Joint (B/L)– Osteoporotic changes seen; marginal osteophytes present. Bilaterally Joint space reduced.

Treatment Schedule: Suranjan Churna 1 gm BD and Sidhartak Taila 10 ml BD orally for 1 month. Janu Basti with Saindhavadi Taila for 7 days twice daily.

Duration: 30 min twice a day (morning and evening) up to 7 consecutive days

Procedure: The procedure of Janu Basti can be divided into three stages such as – Purva Karma, Pradhana Karma and Pashchat Karma.

Purva Karma:

Atura Pareeksha - The patient is examined with reference to Prakriti, Vikriti etc. ten factors by applying Pratyaksha, Anumana and Aptopadesha which will assess Vyadhibala and Dehabala. Then affected knee should be Examined properly and mark the tender area. Examine for scares, wounds in the joint.

Sambhara Sangraha - Materials needed for smooth handling of the Janu Basti procedure must be collected. This include: Medicine (Saindhavadi Taila), Black Gram Powder (Masha), stainless steel plates, bowl, pans, gas stove and sponge.

Atura Siddhata - Patient is asked to lie down or to sit erect on the table. Expose the affected knee properly. The knee is covered with gauze piece. Support the limbs so that they are placed horizontally and comfortably.

Pradhana Karma:

Janu Basti is done in the morning when the Kapha symptoms predominate in the knee (stiffness) and in the evening if Vata symptoms predominate (pain). The area of Janu Basti application was cleaned with cotton. So that the Paste of black gram powder was fix properly. The paste of black gram powder should be mixed properly. Taking ample quantity of water, the paste of black gram powder is prepared around well of 4 Angula high is made on the Knee area. The inner and outer walls of the circular ring were properly sealed with semisolid paste of gram powder over the skin to prevent the leakage of Taila. Janu Basti should be started after checking that there is no leak at the base of the walls of the ring. This well is to be filled with warm Saindhavadi Taila with a piece of cotton (sponge) and it is permitted to be kept there for 30 minutes. This procedure is done in morning (supine position) and evening (prone position) twice daily. To maintain a constant temperature, a small portion of the oil should be removed and mixed with a warm oil of 40-42 degrees

Celsius. The temperature should be maintained constant during the process until the procedure has been finished. Samyak Lakshana of Janu Basti is not mentioned in classics. Since it is a type of Sweda and Sneha, Samyak Sweda and Samyak Sneha Lakshanas can consider. Samyak Sweda Lakshana Sheetoparama, Stambhanigraha, Gauravanigraha and Vyadhihani could be considered for assessment. Samyak Snigdha Lakshanas Snigdha Gatravta and Mrudu Gatravta can be assessed.

Pashchat Karma:

To remove the oil, a sponge piece used and the oil can be collected in a separate vessel. Then the paste is detached from the body. A light massage is giving using the same oil for 5-10 minutes. The lower limbs also shall be covered in the massage. In a relax position the patient is then allowed to take rest i.e. patient is instructed to lie down in supine position without having any contact with external environment. The lower limbs also shall be covered in the massage. The table should have either thin bedding or uniform plain and wooden. On the next day, the same oil shall be reused after adding some more oil to replace the quantity consumed for treatment procedure on the previous day.

Observations:

1. Quantity of the oil: During the analysis, it was observed that Janu Basti required a minimum of 150-200ml of oil for 3 days, again using fresh oil for the remaining 4 days. An average of 400-500 ml of oil is needed per patient for 7 days during the treatment.
2. Quantity of the Masha: During the analysis, it was observed that at least 400gm-500gm of Masha was required for Janu Basti for another 3 days, fresh Masha was used for the remaining 4 days. An average of 1 kg of masha is needed per patient for 7 days during the procedure.
3. Height of the Janu Basti pit: During the analysis, it was observed that the height of the Janu Basti pit built was on average 3 – 4 Angula.
4. Temperature of the oil: From the present analysis, it was found that most patients were able to withstand only Luke's warm oil temperature (40-42⁰C).
5. Duration: In the present analysis, the length of the treatment was set at 30 minutes twice daily (morning and evening) up to 7 consecutive days.

RESULT: After completion of three-months treatment clinical assessments were made from the interrogation with patient and assessment of objective parameters. The outcome observed was a drastic change in the parameters as:

Parameters	Before Treatment	After Treatment
Sandhi shola (Joint Pain)	7	3
Sandhi Sthambha (Joint stiffness)	3	1
Sandhi Shotha (Joint swelling)	1	0
Sandhigatiasamarthatha (Restriction in Range of Joint movements)	2	1
Sandhi Atopa (Crepitus in joint)	2	1
Sandhi Sparsha Akshamatva (Joint Tenderness)	3	1

DISCUSSION

Janu Basti is a kind of Bahya Snehana procedure. Snehana mainly acts against the Ruksha Guna caused by Vata. It also reduces the Stambha and Gauravata. Acharya Vagbhata explained the mode of absorption of the drugs applied over the skin. Thus, according to the above references, the Dravya used in Janu Basti is absorbed through the skin and produces an effect based on the properties of the drug.

The Vata Dosha, which is the key factor in the causation of Sandhigata vata, has almost opposite quality of Saindhavadi Taila. In Sandhigata vata Sthanika Kapha Kshaya is due to Agantu Vata Dosha. Thus, it neutralizes the Vata Dosha and nourishes the Sthanika Kapha Dosha. This helps in Samprapti Vighatana. The properties of Saindhavadi Taila such as Snigdha, Guru, Ushna are totally opposite to the properties of Vata. Sidhartak taila contains Shatavari kwath, godugdha, Aadrak Swaras and other kalka dravya having properties of Vata shaman. Suranjan is having Tikta, Katu Rasa, Laghu, Ruksha guna, Katu vipaka and Ushna veerya and Kapha vata shamaka properties. Thus, these properties act against Vata and help in subsides the Shoola.

CONCLUSION

The present case study indicates the role of Ayurvedic therapy in the treatment of osteoarthritis with positive results. Patients can make substantial changes in symptoms, VAS pain scores, subjective and quantitative standards and practical tests within a comparatively short period of time. In addition, there were no legal questions that existed during the course of the Ayurvedic care of the patient. While this case study

was performed with a single patient with a limited period of time, programming of the mass study with a broad statistical analysis is important for further assessment.

REFERENCES

1. Agnivesha. Charaka Samhita, redacted by Drudabala, with Ayurveda Deepika commentary by chakrapani Varanasi, Chaukamba Sanskrit Sansthana; reprint: 2004.
2. Astanga Samgraha with the commentary of Indu, Published by Central Council for research in Ayurveda and Siddha (CCRAS) New Delhi - 1991.
3. Astanga Hridaya with the commentaries, Sarvangasundara of Arundatta and Ayurveda Rasayana of Hemadri, edited by Pandit Hari Sadasiva Sastri Paradakara Bhisagacarya; Chaukhamba Orientalia, Varanasi, Ninth Edition, 2002.
4. Bhaishajya Ratnavali, Govinda Das with Vidyotini Hindi commentary by Ambikadatta Shastri, editor Rajeshwar Datta Shastri, Chaukhambha Sanskrit Sansthana, 1987.
5. Bhavamishra. Bhava Prakasha with English Translation by Prof. K.R.Srikanta Murthy, 3rd edition, Varanasi, Choukhamba Krishna Das Academy, 2005.
6. Bhela Samhita, Sutrasthana, with English Translation by Krishnamurthy K.H., Varanasi; Chaukhamba Vishwabharati. Reprint 2006.
7. Chakrapanidatta. Chakradatta with vaidhya prabha Hindi commentary by Dr Indradev Tripathi, edited by Prof Ramanath Dwividy, 1st edition Varanasi, Chaukhamba Sanskrit Sansthan, 1992.
8. Davidson's Principles and Practice of Medicine 20th Edition.
9. E.C.Warner: Savill's System of Clinical Medicine, 14th edition, CBS Publications, 1998.
10. Harita Samhita: Hariharprasada Tripathi Chaukhambha Sanskrit Sansthana, 2005.
11. Harrisons's principles of internal medicine Vol-2.; McGraw Hill book company 11th edition 1987.
12. Madhavakara. Madhava Nidanam with Madhu Kosha Sanskrit commentary by Shri. Vijayarakshita and Shrikanta Datta, with the Vidyotini Hindi commentary, edited by Yadunandana Upadhaya, Varanasi, Chaukhambha Sanskrit Sansthan, Part II, reprint 2003.
13. Sahastra Yogam, Hindi translation by Dr Ramnivas Sharma and Dr Surendra Sharma, 3rd edition, Varanasi: Chaukambha Vidhya Bhavan, 2002.
14. Sharangadhara Samhita with Adhamalla's Deepika and Kashiram's Gudarthha Deepika commentary, Varanasi, Krishnadas Academy, reprint 2000.
15. Sushruta Samhita, the Nibandha Sangraha commentary by Dalhanacharya and the Nyayachandrika Panjika of Sri. Gayadasacharya on Nidana Sthana, edited by Vaidya Jadavji Trikamji Acharya and Narayanarama Acharya, Kavyatirtha, Chaukambha Surabharati, Varanasi; reprint 2003.
16. The Ayurvedic Formulary of India. Part I; p. 37. Ministry of Health & Family Welfare, New Delhi: Government of India, 2nd edition, 2003.
17. Vangasena.Vangasena Samhita – with Hindi commentary from Dr. Rajiv Kumara Roy, edited by Dr. Rajiv Kumara Roy, 1st ed. Varanasi: Prachya Prakashan; 2000.
18. Yogaratnakar. With Vaidhya Prabha Hindi commentary, by Dr. Indradev Tripathi and Dr. Dayashankar Tripathi, Varanasi, Krishna Das Academy, 1st edition 1998.