



CLINICAL EVALUATION OF DASAMOOLADI GHRITA VASTI, UPANAHA AND ORAL POLYHERBOMINERAL COMPOUND IN THE MANAGEMENT OF OSTEOARTHRITIS OF KNEE JOINTS (JANU SANDHIGATA VATA)

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ABSTRACT

Sandhigata Vata is the most common form of musculoskeletal disorder. It is a degenerative disease, mostly affects female and the most common age group is in between 35-65 years. Osteoarthritis hampers day to day activities and leads to deformity. Hence, Ayurveda improves the quality of life of osteoarthritis patients through internal and external therapies. In this particular study, *Janu Sandhigata Vata* patients are treating with *Dasamooladi Matra Vasti*, *Upanaha* and oral polyherbomineral compound for a duration of 2 months, in dept. Of Kayachikitsa, Govt. Ayurvedic College and Hospital, Guwahati. The aim of this trial is to establish Ayurvedic Principle of treatment along with various drug options for both internal and external measures to manage *Sandhigata Vata*. However, further research studies are needed to fulfil the aims and objectives.

Keywords: *Janu sandhigata Vata*, osteoarthritis, *Dasamooladi Matra Vasti*, *Upanaha*, oral polyherbomineral compound, clinical trial.

INTRODUCTION

Ayurveda is the Science of life. Health is defined as the state of physical, mental, social and spiritual wellbeing in which disease and infirmity are absent. Among, *Tridosha*, *Vata* is responsible for all activities and to create most of the diseases of old age. According to Ayurveda, all *Dhatu* being undergo degeneration in 4th decade of life. *Sandhigata Vata* is *Vata* dominant disease¹. In the pathogenesis, joints are afflicted by *Vata*. *Sandhi* (joints) are one of the types of *Marma*² and form a part of *Madhyama roga marga*³, makes the disease *Kricchrasadhya*⁴ or *Kastasadhya* (difficult to cure).

Osteoarthritis (OA) is a disorder characterized by progressive joint failure in which all structures of the joint have undergone pathologic change⁵. There are numerous pathways that lead to OA, but the initial step is often joint injury in the setting of failure of protective mechanisms.

Aim: To evaluate efficacy of *Dasamooladi ghrita vasti*, *Upanaha* and oral Polyherbomineral compound consists of *Chandraprabha vati*, *Prabal bhasma* and *Amlaki Rasayan*.

Objective:

1. Clinically evaluate the effect of *Dasamooladi ghrita vasti*, *Upanaha* and oral polyherbomineral compound in the management of Osteoarthritis of knee joints (*Janu sandhigata vata*).
2. To decrease the morbidity of the disease and improve quality of life.

Materials and Methods

1. Sample size: 35
2. Source of data: Total 35 numbers of patients in both OPD and IPD basis, having age in between 25-80 years, irrespective of sex, occupation, religion, in the Dept. Of Kayachikitsa, Govt. Ayurvedic College and Hospital, are selected for clinical trial.

Method of collection of Data:

Patient fulfilling the inclusion criteria are selected for study. Before starting the treatment, detailed clinical history are taken in the clinical research proforma based on Ayurvedic and modern parameters and the written consent are taken from patients. The study has conducted as open labeled interventional clinical trial

after received written consent from The Institutional Ethical Committee.

Inclusion criteria

1. Patient presenting Classical signs and symptoms of *Sandhigata vata*⁶ like
 - *Sandhishoola* (pain in joints)
 - *Sandhishotha* (swelling in joints)
 - *Sandhigraha* (stiffness in joints)
 - *Akunchana Prasarana Vedana* (pain during flexion and extension of joints)
 - *Sparsha Asahyata* (tenderness)
 - *Atopa* (Crepitus)
2. Patients fulfilling the modern criteria of diagnosis of OA like dull pain, swelling, pain increases during walking, pain during flexion and extension of joints, stiffness of joints⁷ etc.
3. Patients having two radiological cardinal features like osteophytes and narrowing of space⁸.
4. Patients between age group of 25-80 years.
5. Patients fit for *Vasti karma*⁹
6. Patients without any previous anatomical deformity.
7. Patients are selected irrespective of sex, religion and occupation.

Exclusion criteria

1. Patients below 25 years and above 80 years of age.
2. Patients suffering from diseases like carcinoma, psoriatic arthritis, reactive arthritis, infective arthritis, gouty arthritis, tuberculosis, SLE, syphilis, HIV, any cardiac disorders, osteomyelitis, orthopaedic deformity etc.
3. Pregnant lady.
4. Patients are unfit for *Vasti* procedure.

Diagnostic criteria:

Diagnosis was made on classical sign and symptom of *Janu Sandhigata Vata*⁶ and Knee Osteoarthritis.

Janu Sandhigata Vata:

- ❖ *Vata Purna Dhriti Sparsha* -on palpation appears as leather bag inflated with air
- ❖ *Sandhi Shotha*- Swelling
- ❖ *Vedana during Prasarana and Akunchana*- Pain during movement of joint
- ❖ *Shoola* - Pain

- ❖ *Atopa*- Crepitus in joint
- ❖ Radiological findings such as narrowing of joint space, osteophytes formation at the joint margin, subchondral bone sclerosis, synovitis etc.

Osteoarthritis:

1. Use related pain affecting one or few joints (rest or nocturnal pain are less common).
2. Stiffness after rest or in morning may occur but is usually brief < 30 minutes.
3. Loss of joint movement or functional limitation.
4. Joint instability.
5. Joint deformity.
6. Joint crepitation.

Assessment criteria

Assessment of the condition has done on a detailed proforma by adopting standard method of scoring of both subjective and objective parameters. These are statistically analysed by using proper statistical method.

Subjective parameters:

1. Crepitation.
2. Stiffness.
3. Pain during walking, flexion or extension.
4. Swelling.

Objective parameters:

1. X ray of knee joints, bilateral weight bearing 45-degree flexed position, Lateral, Patella-femoral and Postero-anterior views ¹⁰ (IKDC²⁶)

2. WOMAC criteria¹¹

Intervention and Posology:²¹

1. *Chandraprabha vati*¹²: 500 mg twice a day for 2 months¹⁷
2. *Praval bhasma*¹³: 250 mg twice a day for 2 months¹⁸
3. *Amlaki Rasayana*¹⁴: 5 gm twice a day for 2 months¹⁹

Anupana: Warm water / honey²⁰

4. *Upanaha*¹⁵ with *Karanja*²⁷ (*Pongamia pinnata* Linn) and *Nirgundi* (*Vitex negundo* Linn) has been given on both OPD and IPD basis for 7 days continuously, if needed, this can be repeated after 2 weeks for 2 months²²

5. *Dasamooladi ghrita*¹⁶ *matra vasti* has been given continuously for 9 days on both OPD and IPD basis, if necessary, *Matra vasti* can be repeated after 2 weeks for 2 months^{23 24}.

Dose of *Matra vasti*: 50 ml²⁵

Duration of the study: 2 months

Follow up interval: 2 weeks or if necessary.

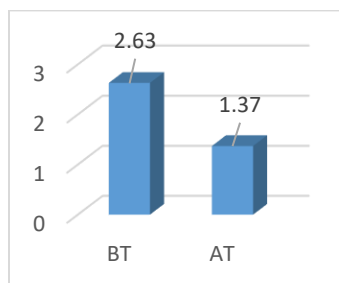
Data Analysis: All the data collecting from case history record are placed, analyzed using appropriate statistical tools such as Arithmetic mean, percentage, standard deviation, Paired t- test and calculate p (probability) value.

Observation and Result

Total 35 patients were enrolled for the present study. The result of Therapeutic profiles are

Table 1: Effect of therapy on *Sandhi shoola* (joint pain)

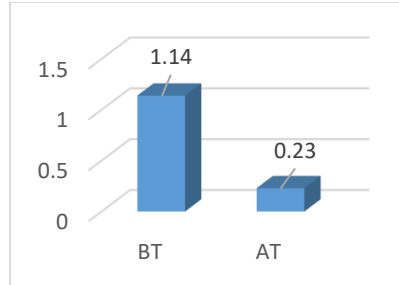
N	Mean		SD		SE		t value	SE of difference	P value	Remarks
	BT	AT	BT	AT	BT	AT				
35	2.63	1.37	0.49	0.49	0.08	0.08	11.3165	0.111	P< 0.0001	Significant



Graph 1:

Table 2: Effect on therapy on *Vata purna driti sparsha* (feeling of bag filled with air on touch)

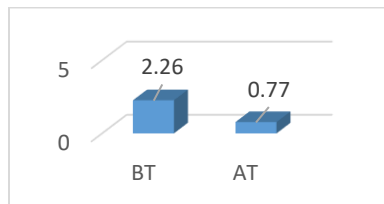
N	Mean		SD		SE	t value	P value	Remarks
	BT	AT	BT	AT				
35	1.14	0.23	0.88	0.23	0.126	7.2851	P< 0.0001	Highly Significant



Graph 2:

Table 3: Effect on therapy on *Prasarana akunchana vedana* (pain on flexion and extension).

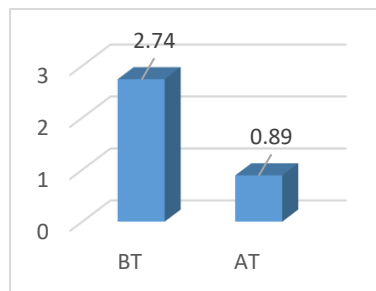
N	Mean		SD		SE	t value	P value	Remarks
	BT	AT	BT	AT				
35	2.26	0.77	0.82	0.73	0.150	9.9107	P< 0.0001	Highly Significant



Graph 3:

Table 4: Effect on therapy on *Sandhi sotha* (swelling):

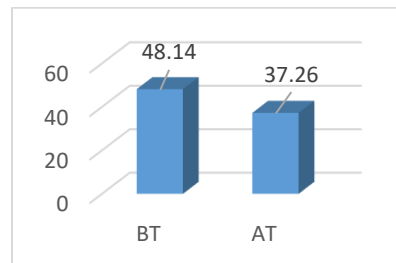
N	Mean		SD		SE	t value	P value	Remarks
	BT	AT	BT	AT				
35	2.74	0.89	0.44	0.68	0.143	13	P< 0.0001	Highly Significant



Graph 4:

Table 5: Effect on therapy on WOMAC scoring.

N	Mean		SD		SE		t value	SE of difference	P value	Remarks
	BT	AT	BT	AT	BT	AT				
35	48.14	37.26	2.87	5.68	0.49	0.96	13.0695	0.833	P < 0.0001	Significant



Graph 5:

DISCUSSION

Sandhigata vata specially occurs among elderly people, in which *Dhatukshaya* (degeneration) takes place which leads to *Vata kopa*. Hence, in this study, the main treatment procedure is considered as *Matra vasti*. *Dasamooladi ghrita* decreases *Sotha*, *Vedana* and stiffness of joints, as it is *Vata kapha hara* in nature. *Upanaha* acts as both *Bandhana*²¹ and *Swedana* procedure. *Karanja*²⁷ and *Nirgundi*²⁸ are having *Vatahara* properties, hence they are used in most *Vatavyadhis*. Percutaneous absorption²⁹ of drugs from topical formulation involves the permeation through skin to reach target tissue.

*Chandraprabha vati*³⁰ is *Sarvarogahara*, *Vrishya*, *Tridosahara* and *Rasayana*. *Prabal Bhasma*³¹ is coral calyx, it acts on *Kshaya Janya Vyadhi* (degenerative disease). *Prabal bhasma* is alkaline in nature and contains calcium as Ca 2+, which is the most compatible form of calcium in body. *Amlaki Rasayana*³² is *Vayahsthapana* (anti-aging) drug, *Tridosahara* and *Sothahara*. It is found significantly to increase grip power of hands and reduced walking time in a research activity.

The result of therapeutic trial showed that- the effect of oral polyherbomineral compound, *Upanaha & Matra vasti* with *Dasamooladi ghrita* is effective. In all criteria p values are less than 0.0001 and shows highly significant.

CONCLUSION

Osteoarthritis is more common form of arthritis, affecting millions of people around world. In modern, NSAIDs, Opioids and bone matrix supplements are used for long period, but do not show satisfactory improvement. Oral Ayurvedic Polyherbomineral formulation and *Panchkarma* procedures are much more convenient to reduce the symptoms and help to repair the joints. However, beyond the present clinical trial, further mass study is required to establish the research drug and procedure, upgrading Principle of treatment of Osteoarthritis.

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