

MATERIALS AND METHODS

Materials:

Sahachar Taila (Batch No- 13608) was purchased from Agasti Pharmaceuticals, Pune and Tāmraśalākā was purchased from Pune market. Standardization was done in Late Principal Bhide Lab.Pune. Some Physiochemical tests like Refractive Index(1.4663 at 40° C), specific gravity (0.9116 gm./ml at 25° C),Acid Value(5.49), Moisture content (<0.1%),Saponification value (186.44) ,Iodine value(93.12) and Viscosity (32.10) were done.

Special case paper was prepared, in which Daśavidha , Aṣṭavidha and Srotasa Parikṣāṇa were done. Total plan of the treatment was explained to patients in their own language. Written consent was taken by the Patient. The patients coming under the inclusive criteria approaching the OPD of Bharati Āyurveda Hospital Pune were selected for the study.

For Group A (Jānubasti) :

- 1) Sahacar Taila.
- 2) Māṣa Piṣṭī
- 3) Steel Rim

Along with these a towel, Napkin, an Abhyang table and water heating facility were a required.

For Group B (Agnikarma) :

- 1) Tāmraśalākā
- 2) Go-Ghruta

Special case paper was prepared, in which Daśavidha ,Aṣṭavidha and Srotasa Parikṣāṇa were done. Total plan of the treatment was explained to patients in their own language. Written consent was taken by the Patient. Hence, by considering all these factors, this study was undertaken with following Aim and Objectives.

➤ **AIM :**

- To study the efficacy of Jānubasti with Sahacar Taila and Agnikarma with Tāmraśalākā in Jānusandhigata Vāta.

➤ **OBJECTIVES :**

- To evaluate the effect of Jānubasti with Sahacar Taila on Jānusandhigata Vāta symptoms viz- Śūla , Śoṭha, Sparśasahatva ,Ānkuncanjanya Prasāranjanya Vedanā ,Sandhispuṭan and Sakaṣṭacalan.
- To evaluate the effect of Agnikarma with Tamraśalākā on Jānusandhigata Vāta symptoms viz- Śūla, Śoṭha, Sparśasatva ,Ānkuncan Prasāranjanya Vedanā,Sandhispuṭan. and Sakaṣṭacalan
- To compare and determine the effect of Jānu Basti with Sahacar Taila and Agnikarma with Tāmraśalākā in Jānusandhigata Vāta.

Methodology:

After obtaining institutional Ethic committee Ethical permission, a randomized open label clinical study was carried out.The study has been registered with CTRI. (CTRI/2015/01/005357)

- I.** Patients were assigned into two group viz., Group A and Group B (both experimental groups). Group A was subjected to Jānubasti with Sahacar Taila and Group B was subjected to Agnikarma with Tāmraśalākā. Symptoms of Samyak Snehana , Swedan and Samyaka Daghda were observed. Adverse effect (Vyāpad) if any were studied. No patient was found having any adverse effect in Jānubasti Group, but in Agnikarma group Dāha lakṣaṇa was only observed . Dāha lakṣaṇa was cured with local application of Ghṛta.
- II.** Total 110 patients were allocated for this study. Group A- Jānubasti with Sahacar Taila and Group B-Agnikarma with Tāmraślākā. In group A, 53 patients were enrolled ; but 3 patients discontinued the treatment and f/u.Group-B ,57 patients were allocated. Out of these, 7 patients were dropped out .Thus two groups of 50 patients each were done.

Inclusion Criteria:-

- Patients having the signs and symptoms of JānusandhigataVāta Viz - Śūla , Śoṭha, Sparsāsahatva ,Ākuncan- Prasāraṇajnya Vedanā ,Sandhisputan and Sakaṣṭacalan .
- Patients between the age group of 30 -70 years.
- Patients of both the sex.
- Swedan Arha patients (for Jānubasti & Agnikarma).
- Patient who were willing for the treatment.
- **Exclusion criteria:-**
 - Pregnant woman.
 - Patients of Āmavāta & Vātarakta .
 - Jānusandhigatavāta due to Abhighāta .
 - Patients with systemic diseases like diabetes, hypertension Patients with major disorders that is traumatic, infective and neoplastic conditions of Knee, Congenital anomalies involving the knee joint, Viral infections like Polio Myelitis, Transverse Myelitis, Bacterial infections like TB Knee joint, Demyelinating diseases, Fibromyalgia, Motor neuron diseases that interfere with the course of treatment were excluded from the study.
 - Patients undergoing other modalities of treatment for Jānusandhigata Vāta .
- **Duration of Study.**
 - Group A– Jānubasti treatment duration was7 days.
 - Group B –Agnikarma treatment duration was7 days.
 - Follow up duration was 30 days for the both groups.
 - 2nd Assessment was taken just after 7 days completion of treatment and two Follow ups were taken on Day 15 and Day 30 in both the groups.
- **Supportive Laboratory Investigations:**
 - X – Ray of Knee joint Anterior – Posterior and Lateral View.
 - RA factor and ASO titer was carried out if necessary.

1. Goniometer



2. Goniometer Assessment



2. Sahacara Taila



3. Procedure of Jānubasti



5. Required material for Agnikarma



6. Procedure of Agnikarma



Design of Research Work:-

Methodology :

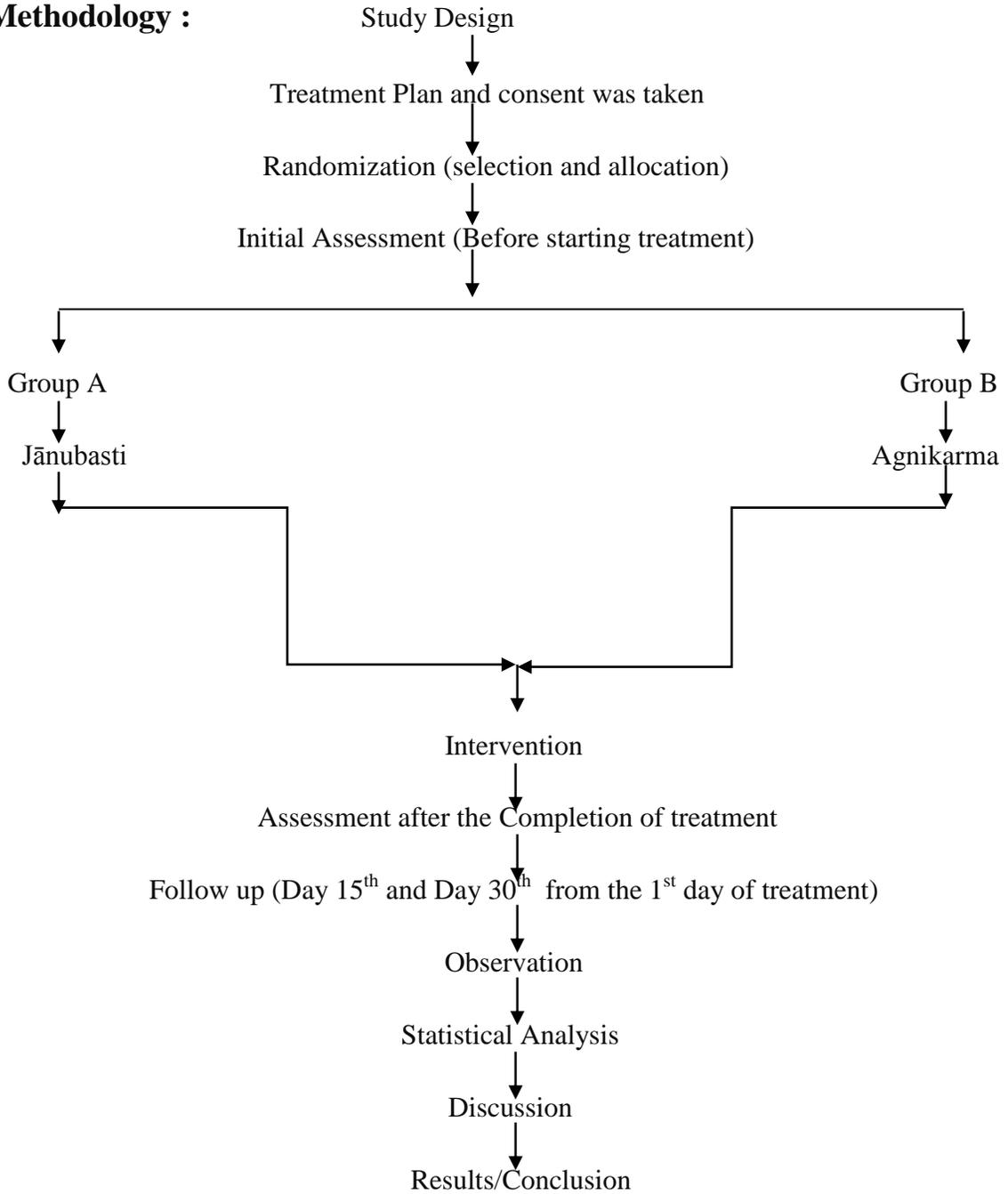


Table No 12: Treatment Scheduled :-

Particular	Group A	Group B
Number of Patients	50	50
Treatment given	Jānubasti	Agnikarma
Purvakarma	Cleaning of Jānusandhi with lukewarm water and preparation of Maṣpiṣṭhī and steel rim	Cleaning of Jānusandhi with lukewarm water
Pradhāna Karma	Jānubasti with Sahacar Taila 120 ml for each Jānusandhi (anterior part) up to the level of 2 Angula	Binduvat One seating per day on the maximum area of tenderness.
Time	After Breakfast	After breakfast
Duration	30 minutes	Till Samyaka Dagdha Lakṣaṇa were observed
Paścāta Karma	Remove the steel rim/ Maṣpiṣṭhī and clean area Jānusandhi with lukewarm water	Apply the Goghrita on Dagdha area
Assessment Day	0 day & 7 th day	0 day & 7 th day
Follow Up	15 th & 30 th Day from the 1 st day of Jānubasti	15 th & 30 th from the 1 st day of Agnikarma
Pathyā-Apathya	Patient was asked to avoid direct exposure to air	Patient was asked to avoid direct exposure to air

I - Standard Operative Procedure of Janubasti - Group (A)

❖ Pūrvakarma:

- Collection of required material .i.e. Sahacar Taila, Maṣpiṣṭī, Steel rim, gas cylinder, stove, sponge, bowl.

- Cleaning surface area of the Jānusandhi with lukewarm water.
- Patient was sitting on the Abhyang table, in comfortable position keeping the effected leg straight.

❖ **Pradhānakarma:**

- The steel rim was fixed with Maṣapiṣṭī on the anterior part of knee joint (Jānusandhi).
- Medicated lukewarm oil was poured with the help of sponge in the rim and oil filled up to the level of 2 Angula.
- Oil was kept for 30 minutes on Jānusandhi.
- During the treatment temperature of the oil (45° C) was retained and replace with Luke warm oil.

❖ **Paścāt karma:**

- After completion of treatment oil and rim / Maṣapiṣṭī, was removed.
- Jānusandhi was cleaned with lukewarm water.
- Patient was asked to avoid direct exposure to air

II-Standard Procedure of Agnikarma - Group (B) :

❖ **Pūrvakarma:**

- Collection of required material i.e. Tāmraśālākā & source of Agni -gas stove, Go-ghrita.
- Cleaning surface area of the Jānusandhi with lukewarm water.
- Points of maximum tenderness was examined and marked by pen on the knee joint.

❖ **Pradhānakarma:**

- Agnikarma was done by red hot heated (4 minute) Tāmraśālākā on marked area of Knee joint directly.
- Agnikarma was performed at the maximum tenderness site and up to the expected extent of the burn, which can cause the Samyak Dagdha Lakṣaṇa, without any Upadrava.

❖ **Paścāt karma:**

- Go-ghrita was applied over the Dagdha area.
- Patient was asked to avoid direct exposure to air.

Assessment Criteria:

❖ Symptoms-

Table No 13 : Śula (Pain)

Śula (Pain)	Grade
No Pain –(0)	0
Mild Pain (1-4)	1
Moderate pain but no difficulty in walking (5- 8)	2
Severe difficulty in walking (9- 10)	3

Table 14: Numeric Rating Scale (patient was asked to enter the number in the column “0-10 Numeric Pain Intensity scale”)

0	1	2	3	4	5	6	7	8	9	10
No pain										Worst pain imaginable

Table No 15: Śoṭha

Śoṭha (swelling) on joint	Grade
No Swelling	0
Slight Swelling	1
Moderate Swelling	2
Severe Swelling	3

Table No 16: Sparsāsahatva

Sparsāsahatva (Tenderness)	Grade
No Tenderness	0
Patients says Tenderness	1
Winching of face on touch	2
Dose not allow to touch the joint	3

Table No 17: Ākuncanjanya Vedanā

Ākuncanjanya Vedanā	Grade
Freely movable No pain (Range 140°)	0
Movable with mild pain (range up to 120°)	1
Movable with moderate pain (range up to 90°)	2
Movable with severe pain (range up to 30°)	3

Table No 18 : Prasāraṇajanya Vedanā

Prasāraṇajanya Vedanā	Grade
Freely movable No pain (Range 140°)	0
Movable with mild pain (range up to 30°)	1
Movable with moderate pain (range up to 90°)	2
Movable with severe pain (range up to 120°)	3

Table No 19: Sandhisphuṭan :

Sandhisphuṭan (crepitus)	Grade
No crepitus	0
Mild Audible crepitus	1
Moderate Audible and Palpable crepitus	2
Severe Audible crepitus	3

Table No 20: Sakṣaṭacalan:

Walking time to cover 21 meters distance in second (Sakṣaṭacalan)	Grade
0 -10seconds	0
11 - 20 seconds	1
21 – 40 seconds	2
41- 60 seconds	3

(Reference-Evaluation of the efficsy of Panchatikta Ksheer Basti in Sandhigata Vata by Natarajan-Dr Suresh Babu,D.G. Mallagi Ayurvedic Medical college-Gadag,2006-2007)