

Efficacy of combined ayurvedic modalities in the management of Janusandhigata vata w.s.r. to Knee osteoarthrities A clinical study

Dr. Ganesh Patil¹, Dr. Prafull Babel²

¹. Associate Professor Kriya Sharir, School of Ayurveda and Siddha Studies Pachma, Sehore.

². HOD Kriya Sharir, School of Ayurveda and Siddha Studies Pachma, Sehore

Abstract—Background: Knee osteoarthritis (OA) is a progressive degenerative disorder of the synovial joints, characterized by pain, stiffness, swelling, and restricted mobility. In Ayurveda, it is correlated with Janu Sandhigata Vāta, a Vātavyādhi manifested due to Vāta prakopa and Dhātu Kṣaya, resulting in the degeneration of joint structures. Modern management largely relies on analgesics, NSAIDs, and joint replacement surgery, which offer only symptomatic relief and are often associated with adverse effects.

Objective: To evaluate the efficacy of combined Ayurvedic modalities in the management of Janu Sandhigata Vāta (knee osteoarthritis), focusing on symptomatic relief and improvement in functional capacity.

Methods: The study integrates internal medication (Aushadha), external therapies (e.g., Abhyanga, Svedana, Janu Basti), and Panchakarma measures (such as Matra Basti) in a combined protocol. The rationale behind this multimodal approach is to achieve Vāta Śamana, nourish Dhātus, relieve local symptoms, and arrest disease progression.

Results: Previous clinical and experimental studies suggest that combined Ayurvedic interventions significantly reduce pain, stiffness, and swelling, improve joint function, and enhance quality of life as assessed by WOMAC and VAS scores. The synergistic action of local therapies with systemic medications provides both immediate and sustained benefits without major adverse effects.

Conclusion: The combined Ayurvedic approach offers a safe, holistic, and cost-effective alternative in the management of Janu Sandhigata Vāta (knee osteoarthritis). It addresses both symptomatic relief and functional improvement, thereby enhancing the quality of life and potentially delaying surgical intervention. Further large-scale randomized controlled trials are warranted to validate these findings.

Index Terms—Janu Sandhigata Vāta, Knee osteoarthritis, Ayurveda, Panchakarma, Combined modalities, Vāta Vyādhi.

I. INTRODUCTION:

According to Ayurveda, simple freedom from disease is not health. For a person to be healthy he should be mentally and spiritually happy and imbalance of Doshika equilibrium is term as Rog. Among Tridosha, Vata is responsible for all Cheshta and all disease. In old age, all Dhatu being to undergo Kshaya, thus leading to VataPrakopa and making the individual prone to many diseases. Among them SandhigataVata stands top in the list. Sushruta has included Vasavada as one among the AstaMahagadha, which is a yapyavyadhi. The Nidana and Lakshana of JanuSandhigataVata which is a Vedavathi, and the etiology and symptoms of Osteoarthritis can be compared. SandhigataVata vis-à-vis Osteoarthritis is a Musculo-skeletal system disease that involves the Major Joints. Osteoarthritis also erroneously called degenerative joint disease, represent failure of diarthrodial (movable, synovial lined) joint. Present day life style deviation and diet variation draws an attention of increased prevalence of SandhigataVata which is 5.78% of rural India and in cities it is more even. According to W.H.O, Osteoarthritis is the second commonest musculoskeletal problem in the world population (30%) after back pain (50%). In India OA of knee is more common than hip joint. Now-a-days it is more common and severe in older women in comparison to men and they are more likely to be symptomatic than men. Arthritis is second only to heart disease as a cause of work disability. It limits everyday activities such as walking, dressing, bathing etc., thus making individual handicapped. No

treatment is available which can prevent or reverses or blocks the disease process. In Allopathy science, mainly analgesics, anti-inflammatory drugs or surgery are the options for the treatment of Osteoarthritis. These don't give satisfactory relief and also causes great adverse effect. So, to overcome those obstacles, traditional Ayurveda old therapies and practices are brought forward here in this clinical trial. Acharya Charaka has mentioned common treatment for Vedavathi i.e. Repeated use of Snehana and Svedana, Basti and Mruduvirechana. Acharya Sushruta has mentioned the treatment for SandhigataVata clearly i.e. Snehana, Upanaha, Agnikarma, Bandhana and Unmardana. SandhigataVata is a condition in which vitiated vayu gets localized in sandhi and causes shoola, shotha and sthambha leading to reduced movements. Janu SandhigataVata is characterized by vatahpurndrutisparsa, vedana during prasarana and akunchana, shotha and aatopa. The disease SandhigataVata is Kastasadhya because it involves the sandhi & Marma, it is situated in Madhyama Rogamarga. Janu is included in the Marmas (vital parts) of the body. Ayurveda explains Janu in Sandhi Marma with two angula (measurement) and as Vaikalayakara. Basti is supposed to be the principle (specific) treatment for Vatic diseases which are located in sandhis and marmas. This is why Basti is said to be half of the whole treatment and sometimes complete treatment. By considering above principle, we are giving snehana by Ksheera Basti & Janu Basti. Ksheera Basti is mridu in nature and produces snehana and brumhana of sharira. It is easy to give patients who are weak, tired and does more work etc. Panchakarma is good treatment for asthyashrayirogas, especially the Basti which is prepared by Ghrita and Dugdha medicated by Tiktarasatmakadravyas are more beneficial. These individual modalities are tried in many studies but they didn't give satisfactory results in long standing relief and reoccurrence of the symptoms, so the combined study inclusive all these modalities are taken to manage this disease for better result. Janu Basti is one of the best modalities of treatment commonly adopted in the management of Janu SandhigataVata. AcharyaVagbhata explained that Sneha should be used according to Yukti, for Bhakshana, Basti, Nasya, Abhyanga, Gandusha, MurdhniTaila, KarnaPoorana and Akshi Tarpana. JanuBasti is a procedure evolved from the procedure

of ShiroBasti which is one among the MurdhniTaila having snehana and swedana simultaneously¹⁻¹⁰. Along with above mentioned modalities Ajamodadi vati is also included in this clinical study. The ingredients of this medicine are well known for its Vataghna, Shulahara and Shothaghna properties. Attempt is made in this study for the combined effect of shamana and shodhana modalities of treatment(Ksheera Basti, Janu Basti and Ajamodadi Vati) in Janu-SandhigataVata.

Aims & Objective of study:

To study the etiopathogenesis of Janu sandhigata vata.
To evaluate the combined effect of Ksheera Basti, Janu Basti and Ajamodadi Vati in Janu Sandhigata Vata.

II. MATERIALS AND METHODS

♦ Conceptual review: - In this section, detailed description about SandhigataVata as an Ayurvedic point of view and modern point of view. The Basti is also described in this section.

♦ Drug review: - In this section detailed description of properties along with pharmacodynamics of the drugs selected for the present study.

♦ Clinical study: - In the present clinical study, 30 patients of SandhigataVata were treated in single groups. i. KsheeraBasti- TiktakKsheerBasti (Guduchisiddh) Dose –Panchaprasruta (~500 ml) Duration- 8 days (1st to 8th day.) ii. JanuBasti- KsheeraBalaTaila Duration- 8 days (9th to 16th day) iii. Shaman Oushadhi- Ajamodadivati Dose- 4gm. Thrice in a day before food. Duration- from 9th day to 30th day. All the relevant data regarding the clinical study were heaped and presented herein tabular form. The observations and results obtained from the above clinical study have been analyzed statistically to evaluate efficacy of procedure.

Drug review

For the present study on the ocean of Ayurveda, three therapies have been selected.

- 1) Tikt ksheer basti
- 2) Janu basti
- 3) Ajamodadi Vati

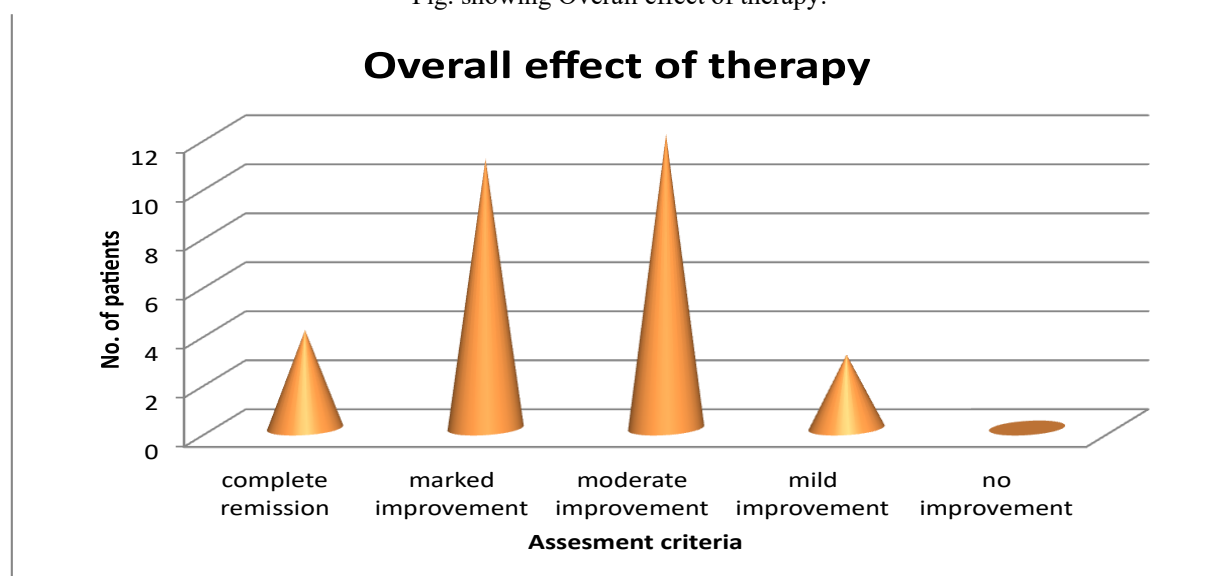
Sr. no.	Drug	Latin name	Family	Rasa	Virya	Vipaka	Guna	karma
1	Ajamod a	Trachyspermum ammi	Umbeliferae	Katu, tikta	ushna	katu	Laghu ruksha, tikshna	Kapha- vataghna
2	Vidang a	Emblia ribes	Myrsinaceae	Katu, kashaya	Ushna	Katu	Laghu ruksha, tikshna	Kapha- vataghna
3	pippali	Piper longum	Piperaceae	Katu	Anushna	Katu	Laghu, snigdha, tikshna	Kapha- vataghna
4	Devadaru	Cedrus deodara	Pinaceae	Tikta	Ushna	Katu	Laghu, snigdha	Kapha- vataghna
5	Chitrak a mula	Plumbago zylanica	Plumbagenaceae	Katu, tikta	Ushna	Katu	Laghu,ruk sha, tikshna.	Kapha- vataghna
6	Shatahv a	Anethum sowa	Umbeliferae	Katu, tikta	Ushna	Katu	Laghu, ruksha,tiks hna.	Vatapittagh na.
7	Marich a	Piper nigrum	Piperaceae	Katu	Ushna	Katu	Laghu, tikshna.	Vata- kaphaghna
8	Haritaki	Terminalia chebula.	Combrataceae	Pancharasa lavana varjita	Ushan a	Madhura	Laghu, ruksha.	Tridosha shamaka
9	Sunthi	Zingiber officinale	Zigeberaceae	Katu	Ushna	Madhura	Laghu, snigdha.	Kapha- vataghna
10	Vridhd a	Argerea speciosa	Convolvulaceae	Katu, tikta,	Ushna	Madhura	Laghu, snigdha	Kapha- vataghna
	daruka			kashaya				a
11	Guda	Saccharum officinarum	Gramineaceae	Madhura	Sheeta	Madhura	Guru, snigdha	Kapha- vataghna
12	Saindhava lavana	Sodium chloride		Lavana	Ushna	Madhura	Laghu, snigdha, tikshna.	Kapha- vataghna
13	Guduchi	Tinospora cordifolia	Menispermaceae	Tikta, kashaya	Ushna	Madhura	Guru, snigdha	Tridosha shamaka
14	Godugdha			Madhura	Sheeta	Madhura	Guru, snigdha, mridu.	Vata- pittaghna.
15	Madhu	Mal departum		Madhura kashaya.	Sheeta	Madhura	Guru, snigdha, mridu.	Vata- pittaghna
16	Goghrita			Madhura	Sheeta	Madhura	Guru, snigdha, mridu.	Vata- pittaghna
17	Tila taila	Sesames indicum	Pedaliaceae	Madhura , katu, tikta, kashaya.	Ushna	Madhura	Guru, snigdha	Tirdosha shamaka
18	Bala	Sida cordifolia	Malvaceae	Madhura	Sheeta	Madhura	Laghu, snigdha, picchila	Vata- pittaghna

Table showing Overall effect of therapy:

Sr. no.	Assessment criteria	No. of patients	Percentage %
1	Complete Remission	4	13.33%
2	Marked improvement	11	36.67%
3	Moderate improvement	12	40%
4	Mild improvement	3	10%
5	No improvement	0	0
Total		30	100%

As per the values shown in the table, maximum no. of patients 40% shows moderate improvement, 36.67% shows marked improvement, 13.33% shows complete remission, 10% shows mild improvement after the 30 days of treatment.

Fig. showing Overall effect of therapy:



III. DISCUSSION

Probable mode of action:

Basti: Here in this study we used ksheera basti. Ksheera basti is made from guduchi siddha dugdha, goghrita, madhu, tila taila. Kaheera basti was given for 8 days after taking food. Ksheera Basti is mridu in nature and produces snehana and brumhana of sharira. It is easy to give patients who are weak, tired and does more work etc. It is an sneha basti as it is prepared from godugdha, goghrita, tila taila. So it does the snehana of the body, vatanulomana, vatashamana. As we Administer basti dravya through anus in the rectum, pakvashaya; these are the sthanas of purishadhara kala, asthidhara kala it does the poshana of the asthidhatu. Basti spreads up to grahani which is site of pittadharakala, majjadharakala it does the

poshana of majjadhatu which is having ashraya of vata and nervous system. By acting on grahani as a site of agni it also improves the dhatvagni and digestion process. According to acharya madhu and ghrta is yogavahi in nature. It helps to increase the potency of dravya, quickly takes the medicines up to the cell level. So it increases the speed of the action of drug on the body. Panchakarma is good treatment for asthyashrayi rogas, especially the Basti which is prepared by Ghrta and Dugdha medicated by Tikta rasatmaka dravyas are more beneficial(c.su. 28/27.). So here we used guduchi as tikta rasatmaka dravyas. Guduchi is tikta, katu, madhura in rasa, rasayan, sangrahi, ushna, laghu, balya, deena in nature. So here guduchi work as vataghna, balya and rasayan. By the rasayana property it helps in the regeneration of bone and joint and stops asthidhatu kshaya and does asthidhatu vridhhi.

According to ashraya ashrayi bhava sambandha as asthidhatu going to increasing ; the vatadosha automatically going to decrease. So it helps in decreasing the sign and symptoms of sandhigata vata caused by dhatukshaya. According to modern medical science, as per Basti /Enema Concerned, in trans rectal route, the rectum has a rich blood and lymph supply and drug can cross the rectal mucosa like other lipid membrane. Thus by entering in general circulation, Basti drugs acts on whole the body. In the present study, the quantity of oil which comes out was less to the given oil in Basti which shows its absorption through the intestinal mucosa. May Basti acts through the nervous system or through the enteric receptors. May it increases the secretion of local enzyme or neurotransmitters Basti influence the normal bacterial flora thus it increases the endogenous synthesis of Vitamin B12, Vitamin K etc. Basti makes the whole metabolism normal. Tikta ksheera basti will show best effect on chronic stage of sandhigata vata rather than acute stage of sandhigata vata.

Janu basti:

Janu Basti is one of the best modality of treatment commonly adopted in the management of Janu Sandhigata Vata. Acharya Vagbhata explained that Sneha should be used according to Yukti, for Bhakshana, Basti, Nasya, Abhyanga, Gandusha, Murdhni Taila, Karna Poorana and Akshi Tarpana¹². Janu Basti is a procedure evolved from the procedure of Shiro Basti which is one among the Murdhni Taila having snehana and swedana simultaneously. Here in this study we used ekapaki ksheera bala taila for the janu basti as per sahasryogama. Ksheera bala taila is prepared from bala mula, godugdha and tila taila. All these drugs are snigdha, laghu, ushna, balya, picchilya, vataghna in nature. Ghrita is yogavahi in nature. So it does the snehana of the janu sandhi and increases the shleshmaka kapha in the joint by decreasing the ruksha, khara, sheeta, vishada guna of the vata. Helps in reducing the sign and symptoms of janu sandhigata vata. Sushita explains that out of four tiryag dhamani's, each dhamani form a network and spread all over body. They have their opening in loma kupa. The dravya applied over the skin is absorbed through those opening and undergo pachana by the help of bhrajaka pitta. Vagbhata explained the same mode of absorption of drugs applied over the skin. So drug applied on skin is absorbed through skin and produce

action according to properties of dravya used. Snehana have opposite properties of vata and similarity to kapha. So when snehana applied over janu sandhi it decreases the vata dosha and increases the kapha dosha(shleshaka kapha). Snehana neutralise the vata and nourishes the kapha i.e shleshaka kapha present in sandhi. And helps in samprapti vighatana of janu sandhigata vata. The heat applied through the procedure decreases the sheeta, ruksha guna of vata and reduces the sandhishoola, sandhistambha, akunchana prasarana janya vedana. Due to khara, ruksha, vishada properties of vata there is atopa in sandhigata vata; by doing snehana by janu basti decreases the atopa by snigdha, picchila, mridu guna of sneha dravyas. Heat applied through procedure do pachana of amaa which is involved in shotha and reduces the shotha. Absorption of drug: Fatty agents are more occlusive than water soluble. They restrict the trans-epidermal waterloss and hence preserve hydration of stratum corneum. Absorption depends upon lipid solubility of drug since the epidermis act as lipid barrier. The dermis however freely permeable to many solutes. Suspending the drug in an oil vehicle can enhance absorption through skin. Because hydrated skin is more permeable than dry skin. Heat application: Application of medicament, heat and massage definitely helps in eliminating the number of noxious element through skin. It promotes local circulation and metabolic activities and also opens the pores of the skin to permit transfer of medicament and nutrients towards the needed site and elimination of vitiated dosha and mala through skin and perspiration. Due to increased metabolic activities there increased blood flow, O₂ concentration and nutrients at that part. Due to heat there is dilation of blood vessels, arteriols take place which helps in drug absorption which are applied and eliminate the waste product like prostaglandins which play vital role in pain pathology.

Ajamodadi vati:

Most of the drugs which are in ajamodadi vati are katu, ushna, tikshna, snigdha, deepaka, pachaka, vatanulomaka, shothahara, vedanashamaka in nature. According to these properties ajamodadi vati important role sandhigata vata (vata vyadhi). These properties are opposite to the properties of vata so it decreases the vitiated vata and reduces the symptoms. Ajamodadi vati does combined effect on vataprakopa and dhatukshaya by improving koshtagni and

dhatvagni and ceases the dhatukshaya process. Most of the drugs having katu, tikta, ushna, pachaka properties does pachana of aama and reduces the avaranajanya vataprakopa and decreases the symptoms like sandhishotha, sparshasahyata, sandhivedana. So, ajamodadi vati act in all types of vataprakopa by amapachana, improving dhatvagni and vatashamana. Ajamodadi vati have good result in acute stage of sandhigata vata and also on chronic stage also. Sandhishoola: Pain is characteristic of vitiated vata. Ajamodadi vati contains madhura ,katu rasa, ushna virya, tikshna, snigdha guna and vatanuloman property. Due to these guna ajamodadi vati reduces vataprakopa and patient got relief from pain. Sandhishotha: Ajamodadi vati by its ushna virya, tikshna guna, katu, tikta rasa does the pachana of amaavarana, vatanulomana and reduces the shotha and sparshasahyata of janu sandigata vata. Atopa, sandhigraha: Atopa and sandhigraha forms due to vataprakopa by riksha, khara, sheeta guna and by shoshana of shleshaka kapha. Ajaomdadi vati contains snigdha guna, ushna virya reduces the vata prakopa by neutralising the vataguna.

IV. CONCLUSION

On the basis of literary review, clinical study, result and observation we have draw some conclusion . These conclusions are, Sandhigata vata is vata dominant disorder . According to modern concept it is chronic degenerative joint disease. It start after the age of 40 yrs due to dhatukshaya, vataprakopak ahara, vihara, mental stress. Family history plays an important role as a cause of janu sandhigata vata. Occupation plays important role according to physical as well as mental stress. Habit is also work as synergistic factor to increase severity of disease. Janu sandhigata vata found more in vata dominant prakriti. Agni and koshttha are the main factors for the development of disease. Patients having mandagni and krura, madhyama koshttha are more prone to develop sandhigata vata. Samhanan, satva, sara, vyayama shakti hani present in sandhigata vata patients. Most of the patients with janu sandhigata vata shows sandhishoola, akunchana prasara janya vedana, atopa and sandhigraha. The was conducted to evaluate the combined effect of Ksheera Basti, Janu Basti and Ajamodadi Vati in Janu Sandhigata Vata. In this study more efficacy was seen in janu bast and shaman

oushadhi as compare to ksheera basti Janu basti and Ajamodadi vati give better results in acute case of sandhigata vata and gives fast relief. Ksheera basti shows slow action on janu sandhigata vata. Over all result of combined therapy shows significant relief in Janu sandhigata vata as it is a dhatukshayajanya vataprakopak vyadhi. In this study it is proved that this modality of treatment was quite safe and does not produce any adverse reaction, which may be used in lieu of modern medicines.

REFERENCES

- [1] Vos T, et al. Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries. *Lancet*. 2017.
- [2] Hunter DJ, Bierma-Zeinstra S. Osteoarthritis. *Lancet*. 2019; 393:1745–1759.
- [3] Pal CP, et al. Epidemiology of knee osteoarthritis in India and related factors. *Indian J Orthop*. 2016.
- [4] Agnivesha. *Charaka Samhita*, Chikitsa Sthana 28/15–17, elaboration on Sandhigata Vāta.
- [5] Sushruta. *Sushruta Samhita*, Nidana Sthana 1/28–29.
- [6] Bannuru RR, et al. Management of osteoarthritis: systematic review and meta-analysis. *Ann Intern Med*. 2019.
- [7] Sharma PV. *Chakradatta*, Vātavyādhi Chikitsa Adhyaya.
- [8] Patil MB, et al. Effect of Janu Basti and oral Ayurvedic drugs in knee osteoarthritis. *AYU Journal*. 2011.
- [9] Shastri AD. *Ayurveda Tatva Sandipika* Commentary on Charaka Samhita, Vātavyādhi Chikitsa.
- [10] Mishra S, et al. Clinical evaluation of Panchakarma and Ayurvedic formulations in Janu Sandhigata Vāta. *Journal of Ayurveda and Integrative Medicine*. 2020.