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A CONTROLLED CLINICAL STUDY TO EVALUATE THE EFFICACY OF *DEVADARU BALADI YOGA BASTI* AND *TIKTA KSHEERA BASTI* IN THE MANAGEMENT OF *JANU SANDHIGATAVATA* W.S.R TO OSTEOARTHRITIS OF KNEE JOINT

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ABSTRACT

Janusandhigatavata, classified under *Vatavyadhi*, presents with clinical manifestations such as *Sandhi Shoola* (joint pain) *Sandhi Shotha* (swelling) and *Sandhi Vedana* (pain) during flexion and extension of the joint. In contemporary medical science, *Janusandhigatavata* can be correlated with osteoarthritis of the knee joint. Osteoarthritis is a degenerative joint disorder characterized by progressive damage to the articular cartilage, subchondral bone changes, and bony outgrowths (osteophytes). The degeneration of these structures ultimately results in joint stiffness and pain, particularly in weight-bearing joints like the knee. When *Vata* gets aggravated, there is no best remedy other than *Basti* for its alleviation. Therefore, *Basti* is considered by *Acharyas* to be the *Ardha chikitsa*[3] (half of entire therapeutics). *Yoga Basti* is composed of both *Anuvasana* and *Niruha Basti*, it does *Brumhana* along with *Vatahara*. So here an attempt is made to know the efficacy of *Devadaru Baladi Taila* and K*ashaya* prepared from *Devadaru Baladi Dravya* mentioned in *Sahasrayogam*, and *Tikta Ksheera Basti* as a comparative for *Yoga Basti in Janusandhigatavata*. **Methods:** It's an open-label Randomised Controlled clinical study 20 subjects with Group-A were treated with *Devadaru Baladi Yoga Basti* for 8 days & 20 subjects with Group-B *Tikta Ksheera Basti* for 8 days. Patients were evaluated before and after the intervention and on follow up after treatment that is on 0^{th} 8^{th} & 24^{th} day of the study. **Results:** Data of both groups, analyzed for subjective and

objective parameters, revealed highly significant efficacy within groups, whereas no significant difference was observed between the groups. **Interpretation & Conclusion:** Both groups demonstrated statistically significant improvement in the outcome measures of *s*, showing reduction in both subjective and objective parameters. Hence, Group-A (*Devadaru Baladi Yoga Basti*) as well as Group-B (*Tikta Ksheera Basti*) can be considered effective in the management of *Janusandhigatavata***.**

KEYWORDS: *Janusandhigatavata, Devadaru Baladi Yoga Basti, Tikta Ksheera Basti* Osteoarthritis.

INTRODUCTION

In *Ayurveda* health is defined as a balance between body, mind, spirit and social wellbeing. The balance of *Tridosha* is also considered as a health, imbalance of these *Doshas* is termed as a *Roga* among *Tridosha Vata Dosha* is responsible for *Kshaya* of all *Dhatus*, and so leading to *Vata Prakopa*. This results in occurrence of the many diseases. *Vata Dosha* tends to dominate during *Vridda Avastha,* leading to an increase in the conditions affecting the bone (*Asthidhatu*). When *Vata Dosha* is Aggravated, it directly impacts *Asthidhatu*, causing disorders collectively termed *Asthi Majjagata Vata*.

Asthi and *Vata Dosha* are related inversely as a *Vata Dosha* increases, *Asthi Dhatu* loses it integrity and becomes weak, when *Vata Dosha* is under control, *Asthi Dhatu* become strong and sturdy. *Asthyashraya Vyadhi Chikitsa* is based on the lines of *Vatahara Chikitsa*. *Vata* takes *Ashraya* in *Asthi "Samanyam vriddhi karanam*" in the context of "*Ashrayashrayee Bhava* is *Viparyaya* to *Asthi* and *Vata dosha*. *Asthi* improves when *Vata dosha* is pacified.

Janusandhigatavata is described under *Vatavyadhi* in all *Samhitas*. In *Vridhavastha*, all *Dhatu* undergo *kshaya* thus leading to *Vataprakopa* and making individuals prone to many disease, among them *Janusandhigatavata* stands top in the list with clinical symptoms like *Sandhi Shoola* and *Sandhi Shotha*, *Prasarana Ankunchanayoho*[1] *Vedana* etc. *Janusandhigatavata* can be correlated with osteoarthritis of knee joint, explain in contemporary science.

Osteoarthritis[2] is a type of degenerative joint disease that results from breakdown of joint cartilage and underling bone. The main symptom of osteoarthritis is joint pain and stiffness, usually the symptoms progress slowly over years and other symptoms may include joint

swelling, decreased range of motion. Most of the osteoarthritis case occurs in weight bearing joint like knee joint, Hip joint etc.

According to WHO osteoarthritis is 2nd most common musculoskeletal disorder in this world. 9.6% of men and 18% of women aged over 40 years have symptomatic osteoarthritis worldwide and it is most frequents joint disease with the prevalence of 22% to 39% in india as per the statistics, in comparison to men its prevalence among women is more.

Contemporary system of medicine has conservative and surgical way of treatments for osteoarthritis along with usage of NSAIDs this kind of treatment may give temporary relief from pain and stiffness and they has side effects parallelly, By considering these factors there is need of other new treatment modality. Which can make the patients free from pain and stiffness without side effects.

Vata is responsible for manifestation of all disease originates in *Shakha, Koshtha Marma, Urdhvasarvaavayava and Anga* with the responsible for separation and combination of *Mutra, Pureesha* when *Vata* gets aggravated there is no best remedy other than *Basti* for its alleviation.

Basti is considered by *Archaryas* to be the *Ardha Chikitsa*[3](half of entire therapeutics) *Yoga Basti* is composed of both *Anuvasana* and *Niruha Basti*. It does *Brumhana* along with *Vatahara*[4], so here an attempt is made to know the efficancy of *Devadaru Baladi taila*[5] and *Kashaya* prepared from *Devadaru Baladi Dravya* mentioned in *Sahasrayogam* and *Tiktaksheera Basti*[6] as a comparative for *Devadaru Baladi Yoga Basti* in *Janusandhigatavata.*

AIM AND OBJECTIVES

a. To evaluate the efficacy *Devadaru Baladi Yoga Basti* in the management of *Janusandhigata Vata* (Osteoarthritis of knee joint)
b. To evaluate the efficacy of *Tikta ksheera Basti* in the management of *Janusandhigata Vata* (Osteoarthritis of knee joint)
c. To compare the efficacy of *Devadaru Baladi Yoga Basti* over *Tikta ksheera Basti* in the management of *Janusandhigata Vata* (Osteoarthritis of knee joint)

MATERIALS AND METHODS

1. SOURCE OF DATA

Patients suffering from J*anusandhigatavata* will be selected from the OPD of the Department of *Panchakarma* of S.J.G.A.M. Collage & Research center, Koppal accourding to pre-set inclusion and exclusion criteria.

2. STUDY DESIGN

A randomized open label controlled comparative clinical study.

3. SAMPLE SIZE AND GROUPING

40 patients of *Janusandhigatavata* fulfilling inclusion criteria will be selected.

Group A: 20 patients will receive *Devadaru Baladi Yoga Basti.*

Group B: 20 patients will receive *Tikta Ksheera Basti.*

4. SELECTION CRITERIA

5. DIAGNOSTIC CRITERIA

Sandhi Shoola & *Sandhi Shotha*, *Sandhi Atopa*, *Prasaranakunchayo Vedana*, *Vata Purna Druti Sparsha* etc are sign and symptoms of *Janusandhigatavata* mentioned in classics will be the criteria for diagnosis.

A. INCLUSION CRITERIA

- Classical Features of *Janusandhigatavata.*
- Patients aged between 40 to 70 years of either gender.
- Patients fit for *Yoga Basti.*

B. EXCLUSION CRITERIA

- Patients with other Systemic Disorders which interfere with the course of treatment.
- Patients suffering with other infectious and chronic autoimmune disorders.
- Parients having history of trauma leading to deformity.
- Pregnant women and lactating mother.
- Development anamolies.
- Unccontrolled Diabetes Mellitus and HTN.

Table no 1: Duration of Study.

SCHEDULE	GROUP-A	GROUP-B
Treatment duration	8 days	8 days
Parihara kala	16 days	16 days
Total study duration	24 days	24 days

The Assessment is done on 0th Day- Before Treatment

8th Day- After Treatment

24th Day- After Follow up

Table no 2: Research Design

Selected 40 Patients of *Janusandhigatavata* were randomly divided into two groups as, Group-A and Group-B.

Table no 3: Grouping and Procedure.

	GROUP-A ***DEVADARU BALADI YOGA BASTI***		**GROUP-B** ***TIKTA KSHEERA BASTI***
PURVA KARMA	*ANUVASANA BASTI* *Sarvanga Abhyanga* and *Sarvanga Bhaspa Swedana* *Bhukta Avastha*	*NIRUHA BASTI* *Abhukta Avastha, Sarvanga Abhyangaa and Sarvanga Bhaspa Swedana*	*TIKTA KSHEERA BASTI* *Abhukta Avastha* *Sarvanga Abhyanga and Sarvanga Bhaspa Swedana*
PRADHANA KARMA	Administration of *Anuvasana Basti* with *Devadaru Baladi Taila* on 1st, 3rd, 5th, 7th, 8th	Administration of *Niruha Basti* with *Devadaru Baladi Kashaya* on 2nd 4th 6th	Administration of *Tikta Ksheera Basti*
PASCHAT KARMA	*Vega Pratyagaman Neerikshna* *Laghu Ushna Anabhisyandi Bhojana Pratyagama*		

Table no 4: **Group: A – Ingredients of *Devadaru Baladi Yoga Basti.***

INGREDIENTS	DOSE
Makshika	2 *pala* (96 ml)
Saindhava Lavana	1 *karsha*(12 gm)
Devadaru Baladi Taila	3 *pala*(144ml)
Puto yavanadi kalka	1 *pala*(48gm)
Devadaru Baladi Kashaya	4 *Pala*(192ml)
TOTAL	**480ml**[7]

Table no 5: Group: B – Ingredients of *Tikta Ksheera Basti.*

INGREDIENTS	DOSE
Makshika	2 *Pala* (96ml)
Saindhava lavana	1 *Karsha* (12gm)
Sneha (Pancha Tikta Ghrita)	3 *Pala* (144ml)
Kalka (Puto yavanadi)	1*Pala* (48gm)
Kwatha (Tikta ksheera paaka)	4 *Pala* (192ml)
TOTAL	**480ml**

Anuvasana Basti Matra (*Sarangadhara* uttarakhanda 5/20) – 1.5 pala (72ml)[8]

ASSESSMENT CRITERIA

Showing The Grades of Subjective Parameters

A) Table no 6: *Sandhi Shoola* (knee joint pain) assessed by VAS SCALE.

VAS POINTS	GRADES	SEVERITY
0	00	No pain
1-3	01	Mild
4-7	02	Moderate
8-10	03	Severe

VAS SCALE (Visual Analogue Scale).

Table no 7: *Sandhi Atopa.*

GRADES	*SANDHI ATOPA*
0	None
1	Felt
2	Heard

OBJECTIVE PARAMETERS

Table no 8: Range of movement of knee joint by Goniometer.

CRITERIA	GRADE	SEVERITY
Flexion above 130^0 Extension 0^0	00	Normal
Flexion 110^0-130^0	01	Mild
Flexion 90^0-111^0	02	Moderate
Flexion $<91^0$	03	Severe

Table no 9: Walking Time.

GRADES	WALKING TIME
0	Up to 20 seconds
1	21-30 seconds
2	31-40 seconds
3	41-50 seconds
4	>51 seconds

Walking time to cover 21meters is recorded and distributed into the following grades.

***Sandhi Shotha* (Swelling of Knee Joint)**

Swelling of joint is measured by Measuring Tape.

Investigation: For diagnostic and Exclusion Purposes

- HB%
- TC and DC
- E S R
- X-RAY of knee joint

Table no 10: Showing overall response.

Response Rates	Response	GROUP A		GROUP B		Mann-Whitney U Test	
		Frequency	%	Frequency	%	Test Statistics	Value
(0%-25%)	Poor Response	0	0%	0	0%	U	181
(25%-50%)	Mild Response	0	0%	0	0%	Effect Size	0.09
(50%-75%)	Moderate Response	3	15%	4	20%	Z	0.56
(75%-99%)	Marked Response	9	45%	9	45%	P	0.58 (>0.05)
(99%-100%)	Complete Response	8	40%	7	35%	Remarks	NS
Total		20	100%	20	100%	NS -Non-Significant	

STATISTICAL METHOD

The results were compared and analysed by using following statistical methods**.**

Table no 11: Showing of statistical methods.

Descriptive	NonParametric	Parametric
Mean Standard Deviation Frequency Percent	Chi-Square test Wilcoxon signed rank test Mann Whitney U test	T test – Independent and Paired Samples Repeated measures ANOVA

All the statistical Operation will be done through service product for Statistical Solutions (SSPS) for Windows V 28 Software.

If Study requires, Other Statistical methods will also be incorporated.

OBSERVATIONS

In the present study conducted on 40 subjects diagnosed with *Janusandhigatavata,* 35% of the participants belonged to the age group of 51-60 years. Among them, 75% were females with respect to occupation, the majority were employes (35%). Dietary habits showed that 60% followed a mixed diet. Regarding digestive parameters, 40% had *Vishamagni* and 42.5%

exhibited *Krura Koshta*. In terms of bowel habits (Mala Pravritti), 52.5% of the participants reported constipation. Assessment of *Prakruti* indicated that 47.5% had a Vata-Kapha constitution. Body weight analysis revealed that 47.5% of the subjects weighed between 56–70 kg. Sleep assessment showed disturbed sleep in 52.5% of cases. Further 40% demonstrated Avara Vyayama Shakti. In 60% of the participants, both knee joints were involved, while 42.5% reported a chronic onset of the disease.

RESULTS

Table no 12: Effect on *Sandhi Shoola.*

Comparisons Between GROUP A with GROUP B in *Sandhi Shoola*									
Observations Recorded on	Group Descriptives			Mean Differance & (Effect % Diff.)	Mann-Whitney U test				
	Group	Mean Score ±SD	Median Value		U Statistic	Effect Size	*Z*	*P*	Remarks
AT	GROUP A (n=20)	1.60 ± 0.75	1.0	0.10 (0.5%)	179	0.10	0.62	0.532 (>0.05)	NS
	GROUP B (n=20)	1.70 ± 0.66	2.0						
AF	GROUP A (n=20)	0.80 ± 0.83	1.0	0.10 (1.4%)	179	0.10	0.62	0.537 (>0.05)	NS
	GROUP B (n=20)	0.90 ± 0.72	1.0						
NS - Non-Significant; MS - Moderately Significant; S - Significant; HS - Highly Significant.									

Table no 13: Effect on *Sandhi Atopa.*

Comparisons Between GROUP A with GROUP B in *SANDHI ATOPA*									
Observations Recorded on	Group Descriptives			Mean Differance & (Effect % Diff.)	Mann-Whitney U test				
	Group	Mean Score ±SD	Median Value		U Statistic	Effect Size	*Z*	*P*	Remarks
AT	GROUP A (n=20)	0.85 ± 0.67	1.0	0.05 (4.3%)	189	0.05	0.34	0.738 (>0.05)	NS
	GROUP B (n=20)	0.80 ± 0.83	1.0						
AF	GROUP A (n=20)	0.80 ± 0.70	1.0	0.05 (4.3%)	188	0.06	0.36	0.716 (>0.05)	NS
	GROUP B (n=20)	0.75 ± 0.85	0.5						
NS - Non-Significant; MS - Moderately Significant; S - Significant; HS - Highly Significant.									

Table no 14: Effect on Range of Movement.

Comparisons Between GROUP A with GROUP B in RANGE OF MOVEMENT									
Observations Recorded on	Group Descriptives			Mean Differance & (Effect % Diff.)	Mann-Whitney U test				
	Group	Mean Score ±SD	Median Value		U Statistic	Effect Size	*Z*	*P*	Remarks
AT	GROUP A (n=20)	0.90 ± 0.72	1.0	0.15 (6.5%)	173	0.13	0.81	0.418 (>0.05)	NS
	GROUP B (n=20)	1.05 ± 0.76	1.0						
AF	GROUP A (n=20)	0.45 ± 0.69	0.0	0.15 (7.1%)	179	0.11	0.67	0.505 (>0.05)	NS
	GROUP B (n=20)	0.60 ± 0.75	0.0						
NS - Non-Significant; MS - Moderately Significant; S - Significant; HS - Highly Significant.									

Table no 15: Effect on Walking Time.

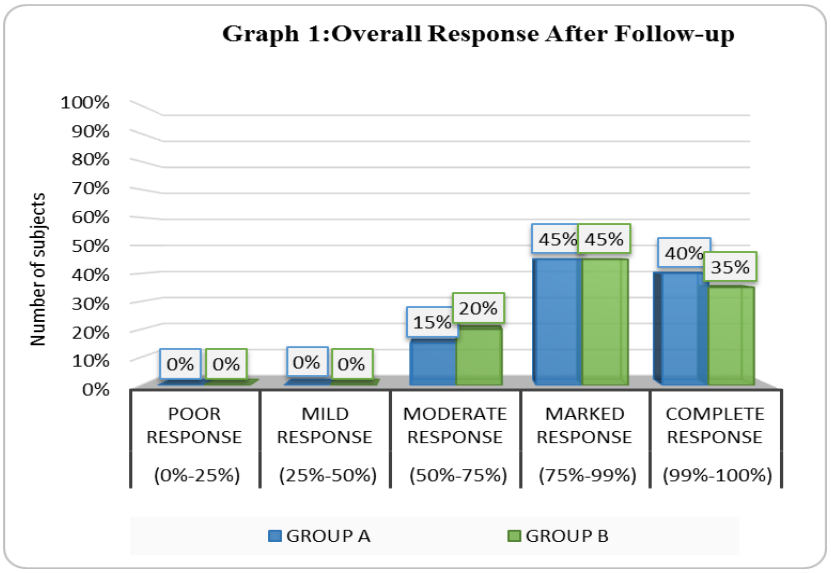
Comparisons Between GROUP A with GROUP B in WALKING TIME									
Observations Recorded on	Group Descriptives			Mean Differance & (Effect % Diff.)	Mann-Whitney U test				
	Group	Mean Score ±SD	Median Value		U Statistic	Effect Size	*Z*	*P*	Remarks
AT	GROUP A (n=20)	1.15 ± 1.04	1.0	0.25 (8.4%)	176	0.11	0.71	0.476 (>0.05)	NS
	GROUP B (n=20)	0.90 ± 0.85	1.0						
AF	GROUP A (n=20)	0.55 ± 0.95	0.0	0.05 (0.6%)	200	0.00	0.02	0.987 (>0.05)	NS
	GROUP B (n=20)	0.50 ± 0.76	0.0						
NS - Non-Significant; MS - Moderately Significant; S - Significant; HS - Highly Significant.									

Table no 16: Effect on *Sandhi Shotha.*

COMPARISONS BETWEEN GROUP A AND GROUP B IN *SANDHI SHOTHA*							
Observations Recorded on	Descriptives		Mean Differance & (Effect % Diff.)	Independent Samples t-Test findings			
	Group	Mean ±SD		±SE of Difference	*t*	*P*	Remarks
AT	A (n=20)	31.75 ±16.62	1.00 (0.4%)	5.55	0.18	0.858 (>0.05)	NS
	B (n=20)	30.75 ±18.43					
AF	A (n=20)	31.35 ±16.46	1.00 (0.4%)	5.48	0.18	0.856 (>0.05)	NS
	B (n=20)	30.35 ±18.14					
NS - Non-Significant; MS - Moderately Significant; S - Significant; HS - Highly Significant.							

OVER ALL RESULTS

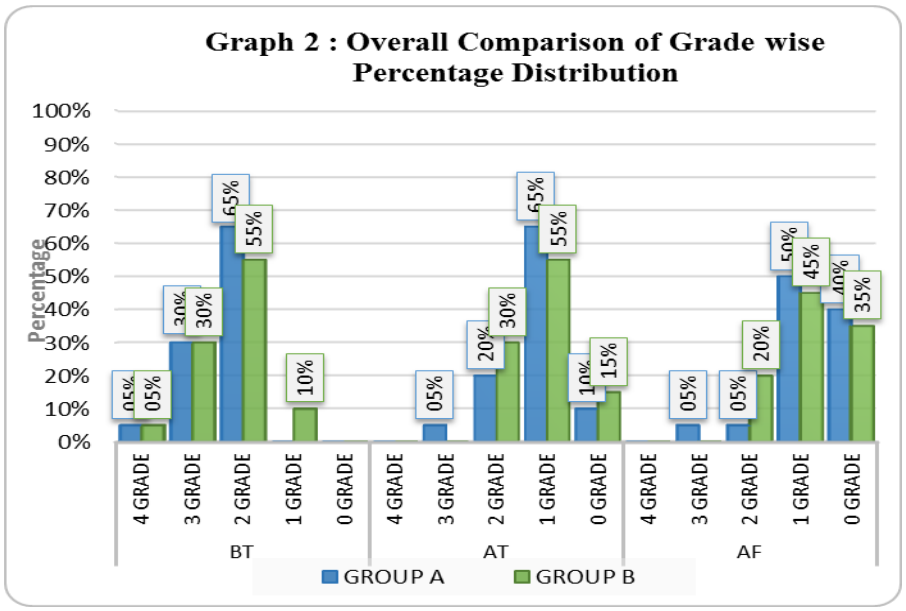
The Mann-Whitney U Test for independent groups, is used to assess the differences between the two groups GROUP A and GROUP B at the completion stage by considering combined observations of all the subjective and objective parameters between the groups GROUP A and GROUP B. The findings; test statistic (U) is calculated as 181, and the corresponding Z-value is 0.56. The p-value for this comparison is reported as 0.575, denoting a statistically '**No-Significant Differences'** between the groups, with a negligible effect size of r= 0.09 result. Hence, both the drugs/treatments/therapies are equally effective.



Overall Comparison of Grade wise Percentage Distribution

The grading Comparisons Between GROUP A with GROUP B considering all the parameters shows that in the initial BT stage GROUP A has 4Grade (n=1 (5%)); 3Grade (n=6 (30%)); 2Grade (n=13 (65%)); 0. But, in the final stage all the gradings reduced to 3Grade (n=1 (5%)); 2Grade (n=1 (5%)); 1Grade (n=10 (50%)); 0Grade (n=8 (40%)).

In same way the GROUP B initial Before Treatment stage has 4Grade (n=1 (5%)); 3Grade (n=6 (30%)); 2Grade (n=11 (55%)); 1Grade (n=2 (10%)); 0. But, in the final stage all the gradings reduced to 2Grade (n=4 (20%)); 1Grade (n=9 (45%)); 0Grade (n=7 (35%)). The same has shown in the following bar diagram.



DISCUSSION

DISCUSSION ON SUBJECTIVE PARAMETERS

Sandhi Shoola

After treatment, patients in Group A experienced 42.9% relief, while those in Group-B showed 43.3% relief. On follow-up, Group-A demonstrated 71.4% relief, compared to 70% in Group-B. Statistical analysis revealed highly significant improvement in *shoola* in both groups ($p < 0.001$) at both post-treatment and follow-up stages. A comparative assessment indicated that Group-A performed slightly better than Group-B, with differences of 0.48% after treatment and 1.43% after follow-up.

Sandhi Atopa

Patients in Group-A experienced 26.1% relief after treatment and 30.4% relief after follow-up, both showing a moderately significant improvement ($p < 0.05$). In Group-B, 30.4% relief was observed after treatment ($p < 0.05$) and 34.8% relief at follow-up, which was statistically significant ($p < 0.01$). Comparative analysis between the two groups indicates that Group-B demonstrated slightly better outcomes than Group-A, with a difference of 4.35% at both the post-treatment (AT) and follow-up (AF) stages.

RESULT ON OBJECTIVE PARAMETERS

Walking Time

In Group-A, 47.7% relief was observed after treatment, which improved to 75% at follow-up. In Group-B, 56.1% relief was recorded after treatment and 75.6% at follow-up. Statistical analysis showed highly significant improvement in both groups after treatment as well as at follow-up ($p < 0.001$). On inter-group comparison, Group-B exhibited comparatively better outcomes, being superior to Group-A by 8.37% at the post-treatment stage and 0.61% at the follow-up stage.

Range of Movement

In Group-A, 52.6% relief in the range of movement was observed after treatment, which further improved to 76% at follow-up. In contrast, Group-B demonstrated 46.2% relief after treatment and 69.2% at follow-up. Statistical analysis revealed a very high level of significance in both groups after treatment as well as at follow-up ($p < 0.001$). Inter-group comparison indicated that Group-A performed slightly better than Group-B, with a difference of 6.48% at the post-treatment stage and 7.09% at the follow-up stage.

Sandhi Shotha

Patients in Group-A experienced 4.65% relief, where as those in Group-B showed 4.21% relief following treatment. At follow-up, Group-A demonstrated 5.86% relief, while Group-B achieved 5.45% relief. Statistical evaluation revealed highly significant improvement in *Shotha* in both groups after treatment as well as at follow-up ($p < 0.001$). On intergroup comparison, the findings indicate that Group-B performed marginally better than Group-A, with a difference of 0.45% at the post-treatment stage and 0.40% at follow-up.

DISCUSSION ON PROBABLE MODE OF ACTION

DEVADARU BALADI YOGA BASTI

In *Yoga Basti*[9], 8 *Bast*i are given in total, in this procedure first *Anuvasana Basti* should be given followed by 3 *Niruha* and 5 *Anuvasana Basti* are given alternatively and at the end again two *Anuvasna Basti* should be given. In *Devadaru Baladi Yoga Basti*, *Niruha Basti* is given with *Devadaru Baladi Kashya Dravya* and *Anuvasana Basti* is given with *Devadaru Baladi Taila*, The formulation of *Yoga Basti* comprises *Madhu, Saindhava Lavana, Devadaru Baladi Taila, Putoyavanadi Kalka*, and *Devadaru Baladi Kashaya*. Each ingredient contributes specific pharmacological actions. *Madhu* exhibits *Kapha-Pitta* alleviating, *Chedana, Sandhana*, *Lekhana, Deepana*, and *Yogavahi* properties, which facilitate drug penetration into micro-channels. *Saindhava Lavana*, with *Sukṣhma* and *Tikṣhna* attributes, aids in liquefying and mobilizing morbid *Doshas*, thereby exerting a *Tridosha* balancing effect. *Devadaru Baladi Taila*, owing to its *Ushna, Tīkṣhna, Vyavayi*, and *Laghu Gunas*, induces *Dosha Visyandana*, reaches minute *Srotas*, and promotes expulsion of vitiated *Doshas*, particularly mitigating *Vata-Kapha* imbalance. Similarly, *Putoyavanadi Kalka* with *Katu-Tikta Rasa* and *Ushna Virya* exerts a *Vata-Kapha Shamana* effect. Finally, *Devadaru Baladi Kashaya* incorporates multiple drugs possessing *Vata-Kapha* pacifying as well as *Tridoshaghna* actions, thus ensuring comprehensive *Dosha* regulation. The collective pharmacological properties of the drugs incorporated in this *Basti* formulation demonstrate *Tridosha* pacifying, analgesic (*Devadaru, Bala, Rasna, Jatamamsi*) and strengthening actions. These effects not only help in alleviating *Vata* vitiation but also contribute to *Brimhana* (*Bala, Jatamansi*) and *Shoolahara* (pain relief – *Sunthi, Devadaru, Bala, Rasna, Sarshapa*).

TIKTA KSHEERA BASTI

In *Basti Kalpa Yogas* where *Ksheera* is used as *Kashaya dravya* and also as *Avapa dravya* are considered as *Ksheera Basti*[10]. *Sushrutha* while explaining the ingredients of *Niruha Basti* in the context of *Niruha Dravya Pramana* included *Ksheera* as one among the *Avapa Dravyas*. Ingredients of *Tikta Ksheera Basti* are Madhu, Saindhava, *Panchatikta Guggulu Ghrita* and *Putoyavanadi Kalka, Tikta Ksheera Paka*. According to Commentator *Arundatta*, substances possessing both *Snigdha* (unctuous) and *Shoshana* (drying) properties that lead to *Kharatwa* (roughness) are said to promote the growth of bone (*Asthivardhana*), since bone itself is inherently *Khara* in nature. However, such a substance with both *Snigdha* and *Shoshana* qualities does not exist. Therefore, *Ksheera* (milk) and *Ghrita* (ghee) which are *Snigdha* in nature, are recommended to be administered along with *Tikta* (bitter) substances

that have *Shoshana* properties. The combined use of *Ksheera, Ghrita*, and *Tikta dravyas* in the form of *Ksheera Basti* is considered beneficial, as this formulation possesses the ability to induce *Kharatwa*. Hence, *Tikta Ksheera Basti* is believed to help in repairing the degeneration of bones and cartilage. The *Adhistana* of *Basti* is *Prurishadhara Kala*[11], *Dalhana* tells that *Purishadhara Kala* is *Astidhara Kala*, also *Asthi* & *Vata* are the *Ashreya Ashreyi Bhava*, hence *Basti Dravya's* with their *Tikta Rasa, Ushna Virya*, Pacify the *Vata* and acts on *Asthivaha Srothas. Majja* is habitat of *Vata*, by acting directly on the lesion sites in *Asthimajjagata Vata* (joints), this combination can not only interrupt the ongoing chain of *Samprapti* (pathogenesis) and arrest disease progression, but also provide marked subjective improvement in patients *Sandhigatavata*.

CONCLUSION

Janusandhigatavata is one among the *Vata Vyadhis*, usually seen in *Vriddhavastha* due to *Dhatu Kshaya* and is considered a *Madhyama Rogamarga Janya Vyadhi*. It develops as a result of *Vata* vitiation along with *Kapha Kshaya*. Therefore, the line of management should include drugs possessing *Vatahara* and *Brumhana* properties.

Among all therapies, *Basti* is regarded as the best treatment for *Vata Vyadhis*. *Yoga Basti* and *Tikta Ksheera Basti* provide *Brumhana, Shoolahara*, and *Vatahara* action, while nourishing *Asthi* and *Majja Dhatu* and promoting strength. In addition, *Sarvanga Abhyanga* and *Bhaspa Swedana* help in the *Nigraha* of *Vata Dosha* and facilitate *Srotomukha Vishodhana.*

This study was undertaken to assess and compare the clinical efficacy of *Devadaru Baladi Yoga Basti* and *Tikta Ksheera Basti* in the management of *Janusandhigatavata*.

Statistical analysis of clinical parameters such as *Sandhi Shoola, Sandhi Shotha*, Walking Time, and Range of Movement revealed “Highly Significant” improvements both after treatment (AT) and after follow-up (AF) within both groups. *Sandhi Atopa* showed a “Moderately Significant” improvement After treatment and “Significant” improvement After Follow up in Group-A, while in Group-B it showed “Significant” improvements both After treatment and After Follow up. However on intergroup comparison, all parameters demonstrated statistically “Non-Significant differences” between the two groups After treatment and After follow-up. Both treatment modalities were effective in reducing the symptoms of J*anusandhigatavata* with Group A showing better clinical response in *Sandhi*

Shoola, Range of Movement, and *Sandhi Shotha*, and Group B showing better response in *Sandhi Atopa* and Walking Time.

However, the inter group comparison revealed "No Statistically Significant Difference", suggesting that both interventions are comparable in efficacy H0 accepted (Null Hypothesis).

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