



“A RANDOMIZED COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFECT OF TWO BALAVARNAKARA BASTI ON POWER PARAMETERS IN PAKSHAGHATA”

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Abstract:

Pakshaghata is one of the 80 *nanatmaja vatavyadhis* and is a *Mahagada* so is *duschikitsya*.¹ It is manifested from vitiated *vata dosha* solely or in combination with other doshas, and presents *karma kshaya*, *karma hani*, *vaksthambha*, *sandibandhavimoksha*, *sankocha*, *ruja*, *shotha*, etc. *Pakshaghata* as the word itself says is the disease where one half of the body bears the trauma of loss of function. It is correlated to stroke phenomenon in contemporary science.

Stroke is the 2nd most leading cause of death worldwide.² In post stroke period the end organs bear the permanent damage like loss of function in the limbs, loss of muscle power, muscle wasting or rigidity and contractures etc. It is important to plan a treatment for regaining & restoring the muscle power & maximum possible functions of the affected areas.

Objectives- To evaluate and compare the effects of both the *Balavarnakara Basthis* in *pakshaghata* in improving muscle power.

Methodology- 30 *pakshaghata* patients were divided into 2 groups randomly & each group was administered with either *Madhu Ghruta Balavarnakara Basti* or *Madhu Taila Balavarnakara Basti* in yoga basti pattern with *Dhanwantara taila matra basti*. Patients were assessed for muscle power in extremities before & after treatment & after follow-up.

Results & conclusion- Both the *bastis* gave equivalent effect in improving muscle power in the patients. Most of the parameters showed highly significant results in both AT & AF in both the groups. Indicating both the *bastis* are effective in improving muscle power in post stroke rehabilitation.

Key words: *Pakshaghata*, *Balavarnakara Basti*, Power parameters

Introduction:

In the present competitive world, it is very important for a person to be able to perform his activities on his own. The diseases like *pakshaghata* which leave behind a permanent loss of function & neurological damage; are burdening for the patients & their attendants both physically & mentally. *Pakshaghata* is one of the 80 *vatavyadhis* and is a *Mahagada* so is *duschikitsya*. It is manifested from vitiated *vata dosha* solely or in combination with other doshas, and presents *karma kshaya*, *karma hani*, *vaksthambha*, *sandibandhavimoksha*, *sankocha*, *ruja*, *shotha*, etc.¹ *Pakshaghata* as the word itself says is the disease where one half of the body bears the trauma of loss of function. It is correlated to stroke phenomenon in contemporary science.

According to WHO, stroke or CVA is defined as ‘rapidly developing clinical signs of focal disturbances of cerebral function, with symptoms lasting for 24 hrs or longer or leading to death, with no apparent cause other than that of vascular origin’.³ Stroke is the 2nd most leading cause of death in the people

above 60 yrs of age & 5th leading cause among the people of 20-59 yrs.² About 1/5th of the patients with acute stroke dies within a month of the event & at least half of those who survive will be left physically disabled.⁴ The post stroke period of the patients that have survived stroke results in a very miserable, dependent, disfigured & disabled prolonged life with constant mental agony. Hence, the main aim of the treatment in post stroke management is to minimize neurological deficits, reduce disability & regain the mobility to its maximum possible extent; which may improve the quality of life for both patients & their care givers. *Basti* is highlighted in the classics for its multifacet, multifactorial therapeutic benefits. Hence after stabilization of vitals in the post stroke patients, different *balya*, *bruhmana*, *rasayana*, *shodhana* etc effect yielding measures have to be employed. So, we planned the administration of *Madhu Taila Balavarnakara Basti* & *Madhu Ghruta Balaarnakara Basti* in post stroke patients. These two *bastis* are said to be *nirupadrava* & can be given even in *vruddhi* & *bala*, as they can be considered as *Yapana Basti*, *Bruhmana Basti*, *Siddha Basti*, *Vataghna Basti* & it is a *vikalpa* of *Niruha Basti*.

In the current study 30 patients with *pakshaghata* were randomly divided into two groups; where Group A was given *Madhu Taila Balavarnakara Basti* & Group B was given *Madhu Ghruta Balavarnakara Basti* on 2nd, 4th & 6th days with *Dhanwantara Taila Matra Basti* on 1st, 3rd, 5th, 7th & 8th days in yoga basti pattern. A follow up assessment was taken after 16 days of *parihara kala*. The signs & symptoms of the patients, *Samyak Nirudha Lakshanas*, & all the planned assessment parameters were recorded on day 1 (BT), day 8 (AT) and day 28 (AF). The results obtained were analyzed for statistical significance with Wilcoxon Signed Rank Test within the groups & Mann Whitney U Test between the groups. After treatment we observed, Power in relation to MRC Power Grading Scale like, Wrist Flexion & Extension, Forearm Pronation & Supination, Elbow Flexion & Extension, Shoulder Flexion & Extension, and Knee Flexion & Extension & Plantar Flexion showed statistically highly significant results in both Group A & Group B. Other power parameters like Hand Grip Test, Dynamometric Test, Heel Exercise Test, Axial Shoulder Wheel Test, Wrist Rotator Test, Spring Pulling Test etc. had shown promising results in both the groups. On comparing between the groups, statistically there was no significant difference in the results of both the groups in almost all the test parameters, indicating the effect of both the *bastis* is almost similar on power parameters in *Pakshaghata*.

Objectives:

- To evaluate the effect of *Madhu Taila Balavarnakara Basti* on power parameters in *Pakshaghata*.
- To evaluate the effect of *Madhu Ghruta Balavarnakara Basti* on power parameters in *Pakshaghata*.
- To compare the effect of two *Balavarnakara Bastis* on the power parameters in *Pakshaghata*.

Methodology:

Source of Data- Minimum of 30 patients, suffering from *pakshaghata* coming under the inclusion criteria approaching the OPD & IPD of SDM Ayurveda Hospital, Udupi, were Selected for the Study.

Method of Collection of Data- It is a randomized comparative clinical study to evaluate the effect of two *balavarnakara basti* on power parameters in the patients of *pakshaghata*, wherein, patients of either sex will be selected.

Table No1- inclusion and exclusion criteria.

Inclusion Criteria-	Exclusion Criteria-
Patients fulfilling the criteria of <i>pakshaghata</i> (CVA with hemiplegia)	Patients with symptoms of <i>pakshaghata</i> with evidence of cerebral infections, space occupying lesions, trauma, RTA & malignancies
Patients of either gender between 30-70 yrs of age	Patients with transient ischemic attack
Patients who are fit for <i>niruha</i> & <i>anuvāsana basti</i>	Patients who are unfit for <i>niruha</i> & <i>anuvāsana basti</i>

Study Design- This is a randomized comparative clinical study with pre-test & post-test design. Whereon, minimum of 30 patients diagnosed as *pakshaghata* between the age group of 30-70 of either sex were

selected. All the patients were divided into two groups with minimum of 15 patients each using permuted block randomization.

GROUP A- was administered with *Madhu Taila Balavarnakara Basti*.

GROUP B- was administered with Madhu Ghruta Balavarnakara Basti in yoga *basti* pattern.

Duration of treatment- 8 days

Duration of follow up- 16 days

Total duration of study- 24 days

Table No.2- *Basti* plan of treatment-

Poorva karma	Pradhana karma	Paschat karma
Preparation of medicine	In yoga <i>basti</i> course (A N A N A N A A) 3 <i>balavarnakara basti</i> were given in the dose of 430 ml on 2 nd , 4 th , & 6 th day morning in empty stomach. Along with 5 <i>anuvāsana bastis</i> with <i>Dhanwantara taila</i> in the dose of 50 ml on 1 st , 3 rd , 5 th , 7 th , & 8 th days in the afternoon immediately after lunch.	Avoidance of <i>Ashta mahadoshakara bhavas</i>
Preparation of patients <i>Abhyanga & Swedana-Sthanika Abhyanga-murchita tila taila Sthanika swedana – nadi sweda with ushna jala</i>		<i>Ushna, laghu, anabhishyandi bhojana</i>
		<i>Parihara kala</i> for 16 days

Table No.3 – Preparation of *basti*-

GROUP A- Madhu Taila Balavarnakara Basti ⁵	GROUP B- Madhu-gritha balavarnakara basti ⁶
<i>Madhu</i> : 2 <i>prasruta</i> (approx. 200ml)	<i>Madhu</i> : 1 <i>prasruta</i> (Aprox 100ml)
<i>Murchita tila taila</i> : 2 <i>prasruta</i> (Aprox. 200ml)	<i>Murchita gritha</i> : 1 <i>prasruta</i> (Aprox. 100ml)
	<i>Ushna jala</i> : 2 <i>prasruta</i> (Aprox 200 ml)
<i>Shatapushpa churna</i> : 2 tola (Aprox. 24gm)	<i>Shatapushpa churna</i> : 2 tola (Aprox 24gm)
<i>Saindhava</i> : Half <i>aksha</i> (Aprox. 6 gm)	<i>Saindhava</i> : Half <i>aksha</i> (Aprox 6gm)
Total quantity : 430ml (Aprox)	Total quantity: 430ml (Aprox)

Assessment Parameters-

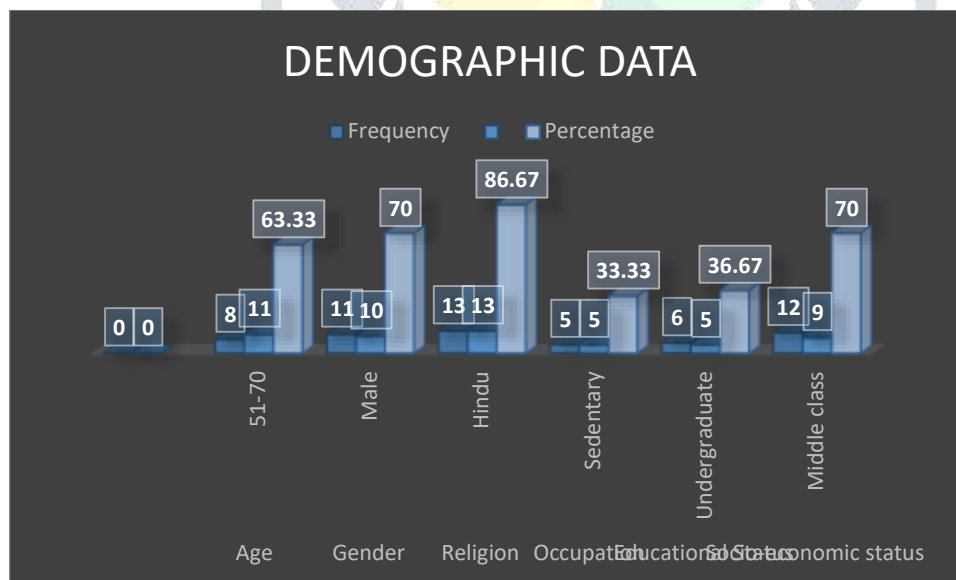
- *Samyak nirudha lakshanas* were assessed daily after the administration of *basti*.

- The results were evaluated on the basis of assessment of signs & symptoms of *pakshaghata*, changes in the power parameters before & after treatment & after follow-up i.e., on 1st day, 8th day & 24th day.
- Assessment of power parameters: MRC Power Grading Scale, Handgrip Power Test, Foot Pressure Test, Dynometric Test, Finger Flexion Exercise Test, Heel Exercise Test, Wrist Rotator Test, Axial Shoulder Wheel Test, Spring Pulling Exercise Test, And Exercise Table Tests.

Observation:

Table No.4- distribution of patients based on demographic data-

Variable	Category	Frequency		Percentage	Total
		Group A	Group B		
Age	51-70	8	11	63.33	19
Gender	Male	11	10	70	21
Religion	Hindu	13	13	86.67	26
Occupation	Sedentary	5	5	33.33	10
Educational Status	Undergraduate	6	5	36.67	11
Socio-economic status	Middle class	12	9	70	21

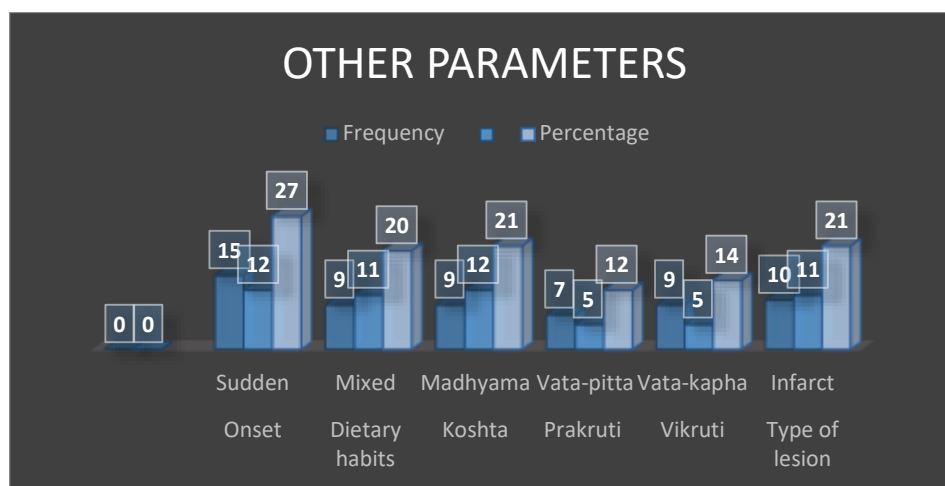


Among the 30 included patients, 19 (63.33%) were in the age group 51-70 yrs probably due to *vata prakopa avastha* of the age group along with increase in other systemic disorders like DM, HTN etc, which predispose the occurrence of stroke. Maximum affected patients were male (70%) is probably due increased exposure to stressful environment and increased indulgence in habits such as smoking and alcohol consumption. Maximum patients affected with *pakshaghata* were found to be hindus 26 (86.67%), occupation with sedentary life style 11 (36.67%), completed under graduation 11 (36.67%), belonging to middle class 21 (70%). The incidence of the disease is not affected by education status or socio-economic

status of the person while the highest incidence in the study may be a chance occurrence.

Table No. 5- Distribution of patients based on other parameters

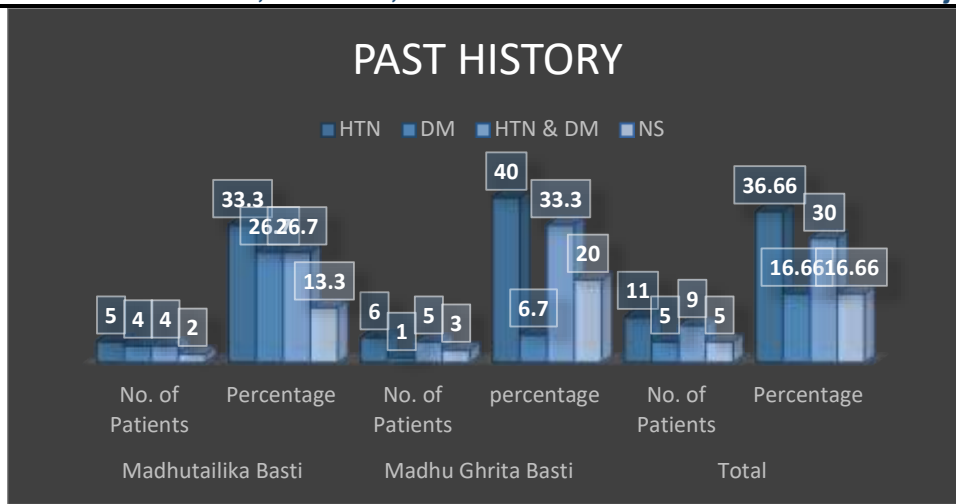
Variable	Category	Frequency		Percentage	Total
		Group A	Group B		
Onset	Sudden	15	12	27	90
Dietary habits	Mixed	9	11	20	66.67
Koshta	Madhyama	9	12	21	70
Prakruti	Vata-pitta	7	5	12	40
Vikruti	Vata-kapha	9	5	14	46.67
Type of lesion	Infarct	10	11	21	70



Among the 30 included patients, maximum patients had sudden onset of symptoms i.e., 27 (90%). Most of the patients were consumers of mixed variety of diet 20 (66.67%) increased intake of non-vegetarian diet might have been a cause for increase in incidence of stroke.⁷ Maximum patients had *madhyama koshta* 21 (70%), with *vata-pitta prakruti* 12 (40%), with disease formed from *vata-kapha vikruti* in 14 (46.67%) and had stroke developed from infarcts in 21 (70%).

Table No.6- Distribution based on past medical history-

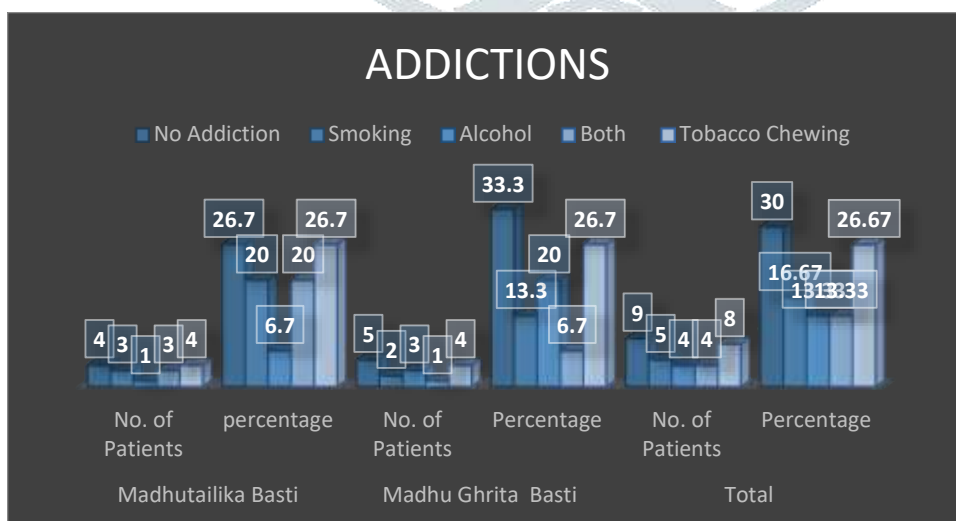
PAST HISTORY	Madhutailika Basti		Madhu Ghrita Basti		Total	
	No. of Patients	Percentage	No. of Patients	percentage	No. of Patients	Percentage
HTN	5	33.3	6	40.0	11	36.66
DM	4	26.7	1	6.7	5	16.66
HTN & DM	4	26.7	5	33.3	9	30
NS	2	13.3	3	20.0	5	16.66
Total	15	100.0	15	100.0	30	100



Most of the study patients were suffering from Hypertension (36.66%), both DM & HTN in 30% & 16.66% were cases of chronic Diabetes mellitus & remaining 16.66% of the patients did not have any such associated past history. This data supports that both DM & HTN are two major risk factors of stroke. According to the data, HTN is the most significant of the risk factors, DM & hyperlipidemia when associated with it adds to the risk.^{8,9}

Table No.7- Distribution based on addictions-

Addictions	Madhutailika Basti		Madhu Ghrita Basti		Total	
	No. of Patients	percentage	No. of Patients	Percentage	No. of Patients	Percentage
No Addiction	4	26.7	5	33.3	9	30
Smoking	3	20.0	2	13.3	5	16.67
Alcohol	1	6.7	3	20.0	4	13.33
Both	3	20.0	1	6.7	4	13.33
Tobacco Chewing	4	26.7	4	26.7	8	26.67
Total	15	100.0	15	100.0	30	100.0



Most of the patients in this study were addicted to one or the other form of addictions like tobacco chewing (26.67%), smoking (16.67%), alcohol consumption (13.33%), both smoking & alcohol (13.33%) while only 30% patients had no such addictive habits. This supports the fact that these addictions are the risk

factors in causing CVA.⁸

Discussion on results:-

Post study the data was analyzed on SPSS VER-20. As the data collected in the study were in ordinal scale non parametric tests were selected for the test of hypothesis. Among the **Non-Parametric Tests, Wilcoxon Signed Rank Test** was selected for the test of significance within the groups & **Mann Whitney 'U' Test** was used to compare the effect of treatment between the groups.

Table No.8- Within the group and between the group statistical analyses of all the parameters

Parameter	Study		BT-AT			Z	P	
			Z	P				
Forearm pronation	Within group	A	-3.17	0.001	HS	-3.44	0.001	HS
		B	-3.46	0.001	HS	-3.35	0.001	HS
	Between the group		-1.19	0.232	NS	-2.36	0.018	S
Elbow flexion	Within group	A	-3.41	0.001	HS	-3.44	0.001	HS
		B	-3.31	0.001	HS	-3.28	0.001	HS
	Between the group		-1.39	0.163	NS	-1.72	0.084	NS
Knee extension	Within group	A	-3.00	0.003	S	-3.87	0.000	HS
		B	-3.46	0.001	HS	-3.63	0.000	HS
	Between the group		-1.17	0.240	NS	0.000	1.000	NS
Plantar flexion	Within group	A	-3.16	0.002	S	-3.27	0.001	HS
		B	-3.31	0.001	HS	-3.49	0.000	HS
	Between the group		-0.39	0.695	NS	-0.977	0.329	NS
Hand grip test	Within group	A	-3.16	0.002	S	-3.49	0.000	HS
		B	-3.31	0.001	HS	-3.28	0.001	HS

	Between the group		-0.39	0.695	NS	-0.57	0.567	NS
Foot pressure	Within group	A	-3.00	0.003	S	--3.63	0.000	HS
		B	-3.63	0.000	HS	-3.41	0.001	HS
	Between the group		-1.50	0.133	NS	-1.50	0.133	NS
Dynametric test	Within group	A	-3.20	0.001	HS	-3.49	0.000	HS
		B	-3.46	0.001	HS	-3.28	0.001	HS
	Between the group		-0.081	0.936	NS	-0.389	0.697	NS
Finger flexion test	Within group	A	-3.20	0.001	HS	-3.50	0.000	HS
		B	-3.16	0.002	HS	-3.41	0.001	HS
	Between the group		-0.630	0.529	NS	-1.98	0.049	S
Heel exercise test	Within group	A	-3.31	0.001	HS	-3.49	0.000	HS
		B	-3.31	0.001	HS	-3.44	0.001	HS
	Between the group		0.000	1.000	NS	0.362	0.718	NS
Axial shoulder wheel	Within group	A	-3.35	0.001	HS	-3.49	0.000	HS
		B	-3.16	0.002	S	-3.15	0.002	S
	Between the group		-1.038	0.299	NS	-1.25	0.209	NS
Quadiceps exercise table test	Within group	A	-3.00	0.003	S	-3.28	0.001	HS
		B	-3.00	0.003	S	-3.35	0.001	HS
	Between the group		0.000	1.000	NS	-0.51	0.537	NS

Hamstri ng exercis e table test	Withi n group	A	-3.28	0.001	HS	-3.20	0.00 1	H S
		B	-3.35	0.001	HS	-3.16	0.00 2	S
	Between the group		-0.630	0.529	NS	-0.57	0.56 7	N S

The effect of treatment on MRC power scale parameters showed highly significant difference in the results within the group from after treatment to after follow up in almost all the parameters. While there was no significant change in the effect of treatment between the groups, indicating the effect of both *Madhu Ghruta Balavarnakara Basti* and *Madhu Taila Balavarnakara Basti* is similar on improving the muscle power in all extremities.

Effect on forearm pronation- Both Group A and Group B, showed highly significant results at $P=0.001$ on assessing after treatment and after follow-up. Also between the groups comparison showed non-significant difference at $P=0.232$ AT and significant difference between the groups at $P=0.018$ AF with Group B slightly better than Group A. indicating *Madhu Ghruta Balavarnakara Basti* was better in improving forearm pronation by the time of follow-up than *Madhu Taila Balavarnakara Basti*.

Effect on elbow flexion- Both Group A and Group B, showed highly significant results at $P=0.001$ on assessing after treatment and after follow-up. Also between the group comparison showed non-significant difference both after treatment and after Follow-up at $P=0.232$ AT and $P=0.018$ AF, indicating both *Madhu Ghruta Balavarnakara Basti* and *Madhu Taila Balavarnakara Basti* are equally effective on elbow flexion test.

Effect on knee flexion- Both Group A and Group B, showed significant results after treatment and changed to highly significant after follow-up. Also between the groups comparison showed non-significant difference both after treatment and after follow-up at $P=0.240$ AT and $P=1.000$ AF, indicating both *Madhu Ghruta Balavarnakara Basti* and *Madhu Taila Balavarnakara Basti* are equally effective.

Effect on plantar flexion- Both Group A and Group B, showed significant results after treatment and changed to highly significant after follow-up. Also between the groups comparison showed non-significant difference both after treatment and after follow-up at $P=0.695$ AT and $P=0.329$ AF, indicating both *Madhu Ghruta Balavarnakara Basti* and *Madhu Taila Balavarnakara Basti* are equally effective.

Effect on hand grip test- Both Group A and Group B, showed significant results after treatment and changed to highly significant after follow-up. Also between the groups comparison showed non-significant difference both after treatment and after follow-up at $P=0.695$ AT and $P=0.567$ AF, indicating both *Madhu Ghruta Balavarnakara Basti* and *Madhu Taila Balavarnakara Basti* are equally effective.

Effect on foot pressure test- Both Group A and Group B, showed significant results after treatment and changed to highly significant after follow-up. Also between the groups comparison showed non-significant difference both after treatment and after follow-up at $P=0.133$ AT and $P=0.133$ AF, indicating both *Madhu Ghruta Balavarnakara Basti* and *Madhu Taila Balavarnakara Basti* are equally effective.

Effect on dynamometric tests- Both Group A and Group B, showed highly significant results at $P=0.001$ on assessing after treatment and after follow-up. Also between the groups comparison showed non-significant difference at $P=0.936$ AT and $P=0.697$ AF, indicating both *Madhu Ghruta Balavarnakara Basti* and *Madhu Taila Balavarnakara Basti* are equally effective.

Effect on finger flexion test- Both Group A and Group B, showed highly significant results at $P=0.001$ on assessing after treatment and after follow-up. Also between the groups comparison showed non-significant difference at $P=0.529$ AT and significant difference between the groups at $P=0.049$ AF with Group B slightly better than Group A. indicating *Madhu Ghruta Balavarnakara Basti* had better results by the time of follow-up than *Madhu Taila Balavarnakara Basti*.

Effect on heel exercise test- Both Group A and Group B, showed highly significant results at $P=0.001$ on assessing after treatment and after follow-up. Also between the groups comparison showed non-significant difference at $P=1.000$ AT and $P=0.718$ AF, indicating both *Madhu Ghruta Balavarnakara Basti* and *Madhu Taila Balavarnakara Basti* are equally effective.

Effect on Axial shoulder wheel test- In Group A both AT & AF showed highly significant results at $P=0.001$ and 0.000 respectively. While in Group B, significant results were found after treatment and after follow-up at $P=0.002$. Also between the groups comparison showed non-significant difference at $P=0.299$ AT and $P=0.209$ AF, indicating both *Madhu Ghruta Balavarnakara Basti* and *Madhu Taila Balavarnakara Basti* are equally effective.

Effect of quadriceps exercise table test- Both Group A and Group B, showed significant results after treatment and changed to highly significant after follow-up. Also between the groups comparison showed non-significant difference at $P=1.000$ AT and $P=0.537$ AF, indicating both *Madhu Ghruta Balavarnakara Basti* and *Madhu Taila Balavarnakara Basti* are equally effective.

Effect on hamstring exercise table test- In Group A both AT & AF showed highly significant results at $P=0.001$. While in Group B, highly significant results were found after treatment at $P=0.001$ and after follow-up significant results were found at $P=0.002$. Also between the groups comparison showed non-significant difference at $P=0.529$ AT and $P=0.567$ AF, indicating both *Madhu Ghruta Balavarnakara Basti* and *Madhu Taila Balavarnakara Basti* are equally effective.

Probable mode of action:

- These two *balavarnakara bastis* are *sidhha basti* explained in *charaka Samhita Uttara basti siddhi adhyaya*, containing *madhu, ghruta, taila, saindhava, shatapushpa* as their key ingredients. The only difference between these two is the choice of *sneha*, as the name itself suggests.
- These two come under the classification of *vrushya basti, siddha basti, madhutailika basti, vataghna basti, rasyana basti* and *bruhmana basti*.
- The most important and largest composition of both the *bastis* is *madhu*. *Madhu* is *madhura kashaya rasatmaka, sukshma gunatmaka, vajeekaraka, tridoshahara* dravya.¹⁰⁻¹¹ Owing to its *sukshma guna*, it reaches the micro channels also acts as a vehicle by its drug carrying capacity.¹²
- *Charaka*, in explanation of *basti dravyas* has mentioned that a *basti* which contains large proportion of *madhu* makes the man more virile.¹³
- *Saindhava* is *ushna, teekshna, sukshma, tridoshahara, deepana, vrushya gunatmaka dravya*.^{14,15} these *sukshma teekshna* properties help the passage of drug molecules into systemic circulation through mucosa. The presence of Na^+ in *saindhava* may play an important role in the absorption of drug as the Na^+ ion channels are commonly used channels for absorption. The concentration of salts causes, irritant action on the wall producing peristalsis and may help in the elimination of *basti* along with *mala* and *doshas*
- The *sneha dravya* used in these *bastis* are *murchita ghruta* and *murchita tila taila*.
- *Murchita ghruta* possess properties like *madhura rasa, balavardhana, kanthya, vrushya, vata-pittahara, rasayana, pushtikara* etc *gunas*.^{16,17}
- *Murchita tila taila* possess properties like *madhura, tikta, bruhmana, balya, balavarnakara, vrushya, kapha-vata hara, basti, panadi karma hitaha* etc.^{18,19}
- By use of *sneha*, fat soluble substances of the drug are easily absorbed from the colon, owing to its *snigdha guna*, *sneha* is generally *vata-hara* and *mrudu kara* so produces softness in the channels and tissues, and facilitates in easy elimination of *doshas*.
- Apart from these function it protects mucus membrane from the untoward effects of irritant constituents of the *basti dravya* like *kshara* etc.
- *Shatapushpa* is *madhura rasa, katu-tiktanurasa yukta teekshna, ushna vuryatmaka, kapha-vata nashaka, bruhmana, balya, pushtikarai, agnivaradhaka, vrushya dravya*.^{20,21}
- It serves the function of *doshaharana* and *shamshamana* and gives necessary thickness to the *basti* material. Less quantity of *kalka* in *basti dravya* makes its consistency thin and reduces the retention time. While, excessive *kalka dravya* makes it thick and causes difficulty in

administration and elimination within the expected time.

- With the right composition of these above said ingredients, the administered *basti*, renders the effects of *rasayana*, *vajeekarana balya*, *bruhmana vata-hara karma*.

Conclusion:

- Maximum no. of patients in this study were seen between the age group of 61-70 yrs. & about 63% of the patients were above 50 yrs of age.
- Majority i.e., 70% of the patients were found to have addictions like alcohol consumption, smoking & tobacco chewing either alone or in combination.
- Most of the patients in the study were males.
- Maximum patients presented with features of *pakshaghata* like *karma kshaya*, *karma hani*, *vaksthambha*, *ruja* & *shotha*.
- *Vata vikruti* was involved in about 73.33% of patients with *anubandha dosha* of *kapha* (40%) & *pitta* (33.33%). Proving that *vata* is the main culprit in *pakshaghata* pathogenesis.
- Power in relation to MRC Power Grading Scale like, wrist flexion & extension, forearm pronation & supination, elbow flexion & extension, Shoulder flexion & extension, Knee flexion & extension & plantar flexion showed statistically highly significant results in both Group A & Group B.
- Other power parameters like hand grip, dynamometric test, heel exercise test, axial shoulder wheel test, wrist rotator test, spring pulling test etc. had shown promising results in both the groups.
- On comparing between the groups, statistically there was no significant difference in the results of both the groups in almost all the test parameters, indicating the effect of both the *bastis* is almost similar on power parameters in *pakshaghata*.
- Further suggestions can be effectively narrated with large sample size by continuing the same treatment modality in either same pattern or *kala basti* pattern as well.

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