Efficacy Of Lashuna Rasayana In Manibandha Marmabhighata

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Abstract

Objectives: (1)To assess Efficacy of a Lashuna rasayana on disease severity in patients suffering from Manibandha marmabhighata / Carpal tunnel syndrome. (2) Effect on functional disability in patients of Manibandha marmabhighata / Carpal tunnel syndrome treated with Lashuna rasayana. Study design:Single group assignment with pretest and posttestdesign. Study selection: 15 patients suffering Manibandha marmabhighata / Carpal tunnel syndrome from were selected for the study from SDM Ayurveda Hospital, Udupi. Intervention :Kostashodhana on Day one by Oral administration of Erandataila in empty stomach, in a dose of 20 ml in the morning along with 100 ml of warm water as after drink, from Day 2 to 16 Oral administration of Lashuna rasayana in a dose of 12 g in empty stomach half an hour before breakfast along with 100 ml of milk as after drink, on Day 17 Pitta virechana with Oral administration of Erandataila in empty stomach, in a dose of 20 ml in the morning along with 100 ml of warm water as after drink. Results:There was significant reduction in all the primary & secondary outcome measures like symptom severity, functional status, VAS for pain, VAS for numbness and hand grip. All these improvements when analyzed by the statistical tests of significance proved highly significant results i.e. p <0.001. INTERPRETATION & CONCLUSION: Lashuna rasayana is effective in both clearing the co morbidity of margavarana as well as pacification of vitiated vata dosha thus significantly reducing the signs and symptoms of Manibandha marmabhighata / Carpal tunnel syndrome.

Keywords: Manibandha marmabhighata, Lashuna rasayana, Carpal tunnel syndrome

Introduction

Vata vyadhi is considered as most virulent among the tridosha. Among the diseases caused by vitiation of vata dosha, samanya & nanatmaja vyadhi presents with distinct features. Literature quotes 80 types of nanatmaja vata vyadhi that is specified as aavishkritatama vata vyadhi1. Kuntata2 is a disorder characterised by the paralysis related to the activities of hand due to abhighata nidana in Manibandha as Rujakara marma3. The Manibandha marmabhighata can happen for two reasons, they are the internal factor & external factor4. External by the way of different activities related to bahya abhighata involving the Manibandha. In contrast to santarpananidana causing excessive kapha&medas can lead to avarana vata vyadhi and can involve the Manibandha marma leading to margavaranajanya Manibandha marmabhighata similar to the samprapti of urustamabha5. Literature affirms the role of marmabhighata in causation of vatavyadhi. Manibandha marmabhighata when it happens for above said reasons result in manifestation of supta, ruja, vastushukairavakirna, shosha, parvashopha, kuntata. The symptoms of Manibhandha marmabhighata include suptata (paresthesia), ruja (pain) and kuntata (paralysis of the hand leading to functional disability) .Thus these symptoms match with that Carpal tunnel syndrome. Surgical intervention in this syndrome will give good relief, whereas conservative management have failed to overcome the disease as it gives just the temporary relief. . Balanced approach rectifying the kapha and medas and simultaneously normalizing the functions of the vatadosha is the sheet anchor of treating Manibandha marmabhighata leading to kuntata. Needless to say Rasayana cikitsa has got an edge over any other conservative management. Also Lashuna rasayana6 is effective in both clearing the co morbidity of margavarana as well as

pacification of vitiated vata dosha thus proving its superiority in the management of Manibandha marmabhighata.

Objectives

- Efficacy of Lashuna rasayana on disease severity in patients suffering from Manibandha marmabhighata / Carpal tunnel syndrome.
- Effect on functional disability in patients of Manibandha marmabhighata / Carpal tunnel syndrome treated with Lashuna rasayana.

Methods And Material:

The study was initiated after obtaining the institute human ethic committees permission. (Ref. No.SDMCAU/ACA-49/ECH-26/15-16 Date: 23/03/2016).

Source of medicine:

Cap. Lashuna rasayana (B.No.170259 Mfg 29March2017) was obtained from Sri DharmasthalaManjunatheshwaraAyurvedic Pharmacy, Udupi.

Source of data:

15 patients who fulfilled diagnostic criteria of Manibandha marmabhighata / carpel tunnel syndrome were takenfor study from OPD and IPD of Sri DharmasthalaManjunatheshwara Ayurveda Hospital, Kuthpady, Udupi .The selection of patient was done irrespective of their gender and caste.

Method of collection of data:

A specific proforma was prepared incorporating all points of history taking, physical signs, and symptoms as mentioned in Ayurveda as well as bio medicine.

Design Of The Study:

Study Type : Interventional
Actual Enrollment : 15 participants
Allocation : Non-Randomized
Endpoint Classification: Efficacy Study
Intervention Model: Single Group Assignment
Masking : Open Label
Primary Purpose : Treatment
Study Start Date : October 2017
Study Completion Date: February 2018

Intervention:

- Koshtashodhana
  Day 1 : Oral administration of eranda taila7 in empty stomach, in a dose of 20 ml in the morning along with 100 ml of warm water as after drink.
- Lashuna Rasayana
  Day 2 to 16 : Oral administration of Lashuna rasayana in a dose of 12 g in empty stomach half an hour before breakfast along with 100 ml of milk8 as after drink.
- Pitta virechana9 Day 17 :
  Oral administration of erandataila in empty stomach, in a dose of 20 ml in the morning along with 100 ml of warm water as after drink.

Follow up duration: 30 days
Total duration of study: 47days.
Diagnostics Criteria:

Signs and symptoms Manibandha marmabhighata / Carpal tunnel syndrome (paresthesia in the distribution of median nerve distal to wrist, weak hand grip, wasting of muscles at the thenar eminence and positive tinels and phalen sign10).

Inclusion Criteria:

1. Subjects with a clinical diagnosis of Manibandha marmabhighata / Carpal tunnel syndrome.
2. Subjects were between 16 to 70 years of age (both ages inclusive).
3. Subjects of both genders.
4. Signed written informed consent form.

Exclusion Criteria:

1. Patients with uncontrolled Diabetes Mellitus & Hypertension.
2. Patients with Fracture of wrist.
3. Subjects with history of excessive menstruation.
4. Patients who were pregnant by patient report or intending to become pregnant during the study.
5. Patients who were been previously diagnosed with cervical radiculopathy.

Assessment Criteria

Primary outcome measures

1. Questionnaire of Levine et al for Clinical Assessment of Carpal Tunnel Syndrome [Time Frame: Baseline, day 17]

Secondary outcome measures

1. Change in Grip strength (Dynamometer) [Time Frame: Baseline, day 17]
2. Change in Visual Analog Scale for pain [Time Frame: Baseline, day 17]
3. Participants Assessment of numbness Over Time by the method of visual analog scale (VAS) ranging from 0 (best) to 10 (worst) cm [Time Frame: Baseline, day 17]

Observations

Out of 15 patients included in the study 6.66% of patient belonged to age group of 16-30 years .33.33% belonged to 31-50 years and 60% belonged to 51-70 years. Patients are more in age group of 51-70 years as these set of patients are more exposed to the trauma and professional wear and tear. Patients within the age group of 31-50 were the second highest ones as they were next to the maximum exposed ones.

Maximum of patients were females comprising total of 86.66%. Most of the females are engaged in house hold activities which involves maximum usage of hands. For example cleaning utensils, cooking, washing clothes etc. Probably this has accounted for the higher incidence of the illness in the present sample. 86.66% of the patients were of Hindu religion in this study. This only represent the dominance of Hindu population in and around Udupi, from where this sample is taken. As such the Hindu religion has nothing to do with the causation of the illness.

As the study was carried out in adults excluding children and seniors, 93.3% of the patients were married and only 6.66% were widowed in the present study.

Out of the 15 patients, 66.66% were housewives and 20% were working as tailors. These people used their wrist extensively in the professional activities and hence have bearing in the causation of illness Manibandha marmabhighata / Carpal tunnel syndrome.

Majority of the patient belonged to middle class family as these people do enough physical activities for their lively hood tend to suffer from Manibandha marmabhighata in comparison to the people of higher class who lead a leisurely life.

The participants of the study were selected from the costal belt, and hence a maximum of 73.33%patients had mixed diet and they mostly consume sea food. Excessive consumption of such

foods may predispose to overweight and obesity. This in turn may contribute to the etiopathogenesis of Manibandha marmabhighata. This fact should be considered when planning pathya-apathya in such patients.

Disturbed sleep was recorded in 75% of the patients in this study. Partially the disturbance is due to the discomfort in the hand related to the Manibandha marmabhighata / Carpal tunnel syndrome.

In most of the other patient the exact cause of the disturbed sleep could not be confirmed.80% of patients had the habit of sleeping in the afternoon. This is obvious as majority housewives were involved in the study who would be tired at the noon due to household work.

An enquiry about the habit revealed that all patients had the habit of taking tea or coffee. Around 13.33% of the patients were addicted to tobacco chewing or smoking cigarettes.20% of the patient had a family history of Carpal tunnel syndrome. This is because 3 patients had family history of obesity. Other 80% did not have family history of carpal tunnel.

Out of 15 patients 46.66% of the patients belonged to each of vata pitta and kapha vata prakriti. 6.66% belonged to pitta kaphaprakriti. 80 % of the patients had madhyamasara. 40% of the patients showed madhyamasamhanaana. A majority of 66.66% had madhyamasatva. Madhyama type of vyayamashakthi was recorded in 46.66% of patients. 73.33% of the patients had madhyamaabhyavaharanashakthi Majority of 80% patients of the study had madhyamajaranashakthi followed by another 13.33% with the avarajaranashakthi.

Out of the 15 patients, 73.33 % of patients had gradual onset of symptoms as against 26.66% of patients complained of sudden onset of illness. The symptom of ruk / pain, supti / numbness and kuntata / reduced hand grip was recorded in all the 15 patients of Manibandha marmabhighata / carpal tunnel syndrome. In 80 % of patients the over strain of the wrist during different professional or house hold activity is recognized as major cause of illness in the form of bahya abhighata. No such cause could be recorded in 20 % of patients pointing towards the internal injury as the cause of Manibandha marmabhighata / Carpal tunnel syndrome.

Results: (Table No.1)

Statistical analysis before and after the treatment was done using Sigma stat statistics software version 3.5 with the Mean(±SE), Standards deviation and results were analyzed statistically using Wilcoxon signed rank test.

1. Effect of Lashuna rasayana on symptom severity of the illness

By adapting the Questionnaire of Levine et al for Clinical Assessment of Carpal Tunnel Syndrome, the symptom severity of the Manibandha marmabhighata / Carpal tunnel syndrome was assessed. The mean score of severity before the intervention was 44.467 that came down to 31.800 following medication with Lashuna rasayana. Thus a reduction into the severity score of 12.667 was recorded in this study. Also the improvement was statistically significant when analyzed by the Wilcoxon Signed Rank Test with $p < 0.001$.

2. Effect of Lashuna rasayana on functional disability status

The functional disabilitystatus of the patients suffering from Manibandha marmabhighata / carpal tunnel syndrome was assessed by adapting the Questionnaire of Levine et al for Clinical Assessment of Carpal Tunnel Syndrome. At the baseline the mean score of functional disabilitystatus was 34.600 which came down to 25.333 following Lashuna rasayana thus recording an improvement by 9.267 is functional disabilitystatus score. Again when analyzed by the statistical test of significance, this improvement was highly significant with $p < 0.001$.

3. Effect of Lashuna rasayana on VAS pain score:

The visual analogue scale VAS of 0 to 10 was used to assess the intensity of pain in the hand. Higher values represented the worse pain in hand. The mean VAS pain score in 15 patients at base line was 8.133 that came down to 4.0 following the medication. Thus an improvement of 4.333 in the mean Vas pain score was recorded. By the method of Wilcoxon Signed Rank test when the improvement was analyzed it was found to be statistically highly significant with P<0.001.

4. Effect of Lashuna rasayana on VAS numbness score:

For assessing the severity of subjective symptom of numbness of the hand the visual analogue scale - VAS of 0 to 10 was used in patients suffering from Manibandha marmabhighata / Carpal tunnel syndrome. Higher the VAS score the worst is the symptom numbness. The initial VAS score was 8.133 before beginning the Lashuna rasayana. After the intervention the numbness recorded was 4.133 thus showing a decrease in severity of numbness VAS score of 4. Further by adapting the Wilcoxon signed rank test, the improvement recorded by medication was found to be statistically significant with P value <0.001.

5. Effect of Lashuna rasayana on hand grip strength.

The hand grip strength of the patients suffering from Manibandha marmabhighata / Carpal tunnel syndrome was measured by using the dynamometer. At baseline the mean hand grip strength was 5.600 Kg. After the Lashuna rasayana this improved to 12.133 Kg. Thus an improvement of 6.53 Kg in the hand grip strength was recorded in the study. Analysis of the statistical significance was done by adapting the paired t test, it showed that the improvement in the hand grip strength was statistically significant with p value of <0.001.

The Overall Effect Of The Lashuna Rasayana:(Table 2, Figure 1)

Complete remission: This was not seen any patient, it might be because of the limited duration of the study

Best remission: This was not seen any patient, it might be because of the limited duration of the study

Moderate remission: This was seen in 13.33% of the total patients participated in the study.

Average remission: 80% of patients belonged to this category. This result proves that there was a reduction in symptoms of Manibandha marmabhighata.

Poor remission: 6.66% of total participated patients fall under this category.

Worsening: This was not seen any patient in the study.

Table 1: Effect of Lashuna Rasayana on the symptoms of Manibandha marmabhighata

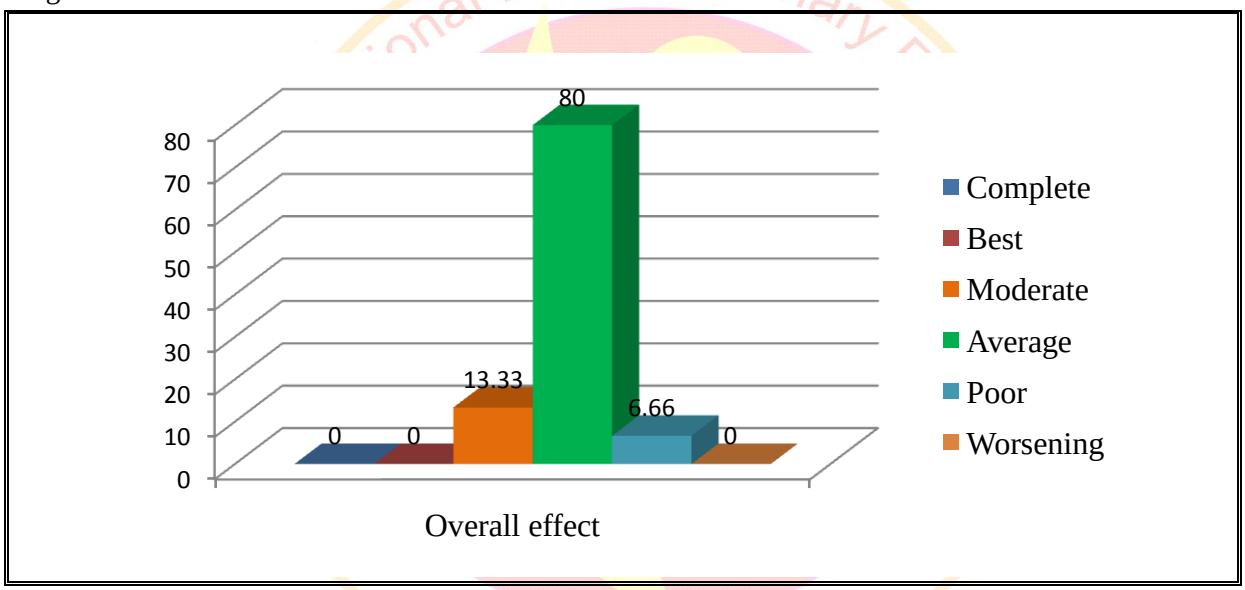
Outcome (score range)	Data	Mean	±SD	±SD	Median	Min	max	Mean BT-AT	P value*
Severity (11-55)	**BT**	44.467	5.986	1.546	43.000	35.000	57.000	12.667	<0.001
	AT	31.800	5.046	1.303	31.000	25.000	41.000		
Functional status	**BT**	34.600	2.384	0.616	35.000	30.000	38.000	9.267	<0.001
(8-40)	**AT**	25.333	2.769	0.715	26.000	20.000	30.000		
Pain (0-10)	**BT**	8.133	2.560	0.661	8.000	3.000	14.000	4.133	<0.001
	AT	4.000	1.414	0.365	4.000	1.0000	7.000		
Numbness (0-10)	**BT**	8.133	2.532	0.654	8.000	6.000	15.000	4	<0.001

	AT	4.133	1.457	0.376	4.000	2.000	7.000		
***WILCOXON**		SIGNED		RANK		TEST			
Hand grip (Kg)	**BT**	5.600	3.291	0.376	4.000	0.000	12.000	6.53	<0.001
	AT	12.133	4.673	1.207	6.000	4.000	23.000		
*** Paired t-Test**									

Table 2: Overall effect of the treatment

Extent of Change	Change category	No of patients	% of patients
100 % Improvement	Complete remission	0	0
Improvement from 76 to 99 %	Best remission	0	0
Improvement from 51 to 75 %	Moderate remission	2	13.33%
Improvement from 26 to 50 %	Average remission	12	80%
Improvement from 1 to 25 %	Poor remission	1	6.66%
Worsening	Worsening	0	0

Figure 1: Overall effect of treatment



Discussion:

Hand is prehensile, multi fingered appendage located at end of forearm in humans. It plays an important function in body language and sign language. Wrist joint support movements of hand and forearm .Sports and manual works involve complicated and coordinated activities of hand and wrist joint. It is second most active joint after ankle joint. Any injury to this will lead to Manibandha marmabhighata / Carpal tunnel syndrome.

This clinical work is established to see the clinical efficacy of the Lashuna rasayana in Manibandha marmabhighata. The attempt of discussion is to analyze the observations and results post therapeutically for a designed study of Manibandha marmabhighata.

As observed in result, the quality of life improved which is evident by reduction of severity score, reduction of pain and numbness,improvement in the functional ability status and increase in the hand grip. The above said symptoms can be correlated to ruja, kuntata, suptata which are features of aggravated vata. All these features have been effectively treated by Lashuna rasayana irrespective of its avarana or abhighata samprapthi.

The study proved favorable response to this conservative management with near complete remission of the clinical symptoms. Also the medication is equally safe with no any adverse effects even in patients having pitta involved in the prakriti. Thus the study also gives more scope for further clinical studies in patients suffering from Manibandha marmabhighata. More clinical studies may be planned with different dosage schedule of Lashuna rasayana to establish more evidences to this conservative management of Manibandha marmabhighata.

Conclusion

Lashuna Rasayana showed statistically significance in remission of sign and symptoms as well as by improving the symptom severity and functional status. In thisstudy majority of patients have recorded average remission. This is pointing towards efficacy of Lashuna Rasayana in overall symptomatology of Manibandha marmabhighata as evidenced by primary and secondary outcome measures. Hence patients of Manibandha marmabhighata can opt for palliative medication prior to considering interventional measures.

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