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A CLINICAL STUDY TO COMPARE THE EFFECTIVENESS OF MASHA TAILA THROUGH EXTERNAL APPLICATION (ABHYANG) & INTERNAL APPLICATION (NASYA) ALONG WITH RASNADI GUGUULU IN CASES OF GREEVA STAMBH W.S.R. TO CERVICAL SPONDYLOSIS

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ABSTRACT

Health is an evident outcome of multi-factorial, multilevel functional and metabolic efficiency of a living organism. Cervical Spondylosis is a common problem encountered in practice. In Ayurveda cervical Spondylosis is referred as Greeva Stambh. Previously people in the 4th and 5th decade of life suffer more with this degenerative conditions. But, the prevalence of cervical spondylosis is increasing day to day and found even in early age's also, due to more sedentary work, keeping neck stiff, degeneration due to aging, injuries to the cervical spine, wt. bearing, various profession involving more neck movements and excess usage of artificial food which contain chemicals that are harmful to the body. In this research drugs are selected from Ayurvedic classics and the effect of Masha Taila is compared by Abhyang and Nasya along with oral medication of Rasnadi Guggulu in both cases. Over all aims of this treatment is to provide relief to the patients of Cervical Spondylosis, and to reduce the rate of further degeneration.

KEYWORDS: Greeva Stambh, Cervical Spondylosis, Abhyang, Nasya.

INTRODUCTION

Ayurveda is a science of life, which is continuously developing as a result of various discussions and researches from ancient time onwards. The importance of Ayurveda, in

global scenario is because of its holistic approach towards positive life style. It gives equal importance to preventive and curative aspects of diseases. Today is the era of modernization and fast life. Our life became so fast that we have no time for our own body. Our life style follows clock and move direct according to spike of clock. Everybody is busy and leading stressful life.

Advancement of busy, professional and social life, improper sitting posture in offices, continuous work in one posture and overexertion, jerking movements during traveling and sports – all these factors create undue pressure and stress injury to the spine and play an important role in producing disease like Cervical Spondylosis. Faulty dietetic habits and irregular life style is responsible for early degenerative changes in bodily tissue and play a vital role in the manifestation of such degenerative disorder. These disease are now becoming a significant threat to the working population.

So here we made an effort to evolve a safe and complete solution for this problem with the help of Ayurvedic medicine, Abhyang and Nasya Karma therapy. For this research entitled "A Clinical Study to Compare the effectiveness of Masha Taila through External application (Abhyang) & Internal application (Nasya) along with Rasnadi Guggulu in Cases of Greeva Stambh w.s.r. to Cervical Spondylosis)" medicines are selected from Ayurvedic Classics.

1. Masha Taila (Chakradutt, B.R VVC).
2. Rasnadi Guggulu (Y.R., V.V.C.1-9).

In pathogenesis of "Greeva Stambh" (cervical spondylosis), Vitiation of Vata plays an important role, so the drug should be selected in such a way that it affects on the dosha involved in pathogenesis of disease & also helps in samprapti vighatan of Greeva Stambh.

In this research effect of Masha Taila is compared through Abhyang & Nasya along with Rasnadi Guggulu (Orally). Total 60 Patients of Greeva Stambh were registered in a specialized research proforma along with informed consent from OPD and IPD of State Ayurvedic College and Hospital Lucknow, all the selected patients were divided into 2 groups. Among these 5 patients were drop out.

Group A- Patients were treated with Masha Taila (Abhyang) + Rasnadi Guggulu 2 vati (each 500mg) BD orally with Luke warm water.

Group B- Patients were treated with Masha Taila (Nasya) + Rasnadi Guggulu 2 vati (each 500mg) BD with Luke warm water.

Patients were thoroughly examined and investigated by the following inclusion and exclusion criteria. Treatment period was of three month. Response of the treatment was recorded by periodical follow up. At the end of the treatment Group B shows more significant result than treatment of Group A.

MATERIAL AND METHODS

Sample size: Total 60 patients of Greeva Stambh were registered for the present study from OPD and IPD of S.A.C & H. Lko. Among these 5 patients were drop out.

Grouping: The registerd patients of Greeva Stambh for the present clinical study were kept into two groups i.e. Group A with 28 patients and Group B with 27 patients.

Plan of Treatment

Group A: In this group of patient, Abhyang will be given with Masha Tail on neck & shoulder region for 5 min. & Rasnadi guggulu orally 2 tab BD with luke warm water after taking meal.

Group B: In this group of patient, Nasya of Masha Taila will be given, along with Rasnadi guggulu orally 2 tab BD with luke warm water after taking meal.

Inclusion Criteria

1. Patient of the age group between 25-64 years will be selected.
2. Sex: Both male & female.
3. All socio-economically persons.
4. Patient voluntarily willing to participate in the trial.

Symptoms - (According to Ch.Chi.28/20-23).

Essential Criteria

1. Greeva Shool (Neck pain)
2. Greeva Stambh (Stiffness of neck)
3. Greeva Hundana (Restricted movement of neck)

Non essential criteria

1. Gatra Suptata (Paraesthesia)
2. Paniprastha siroruja (Radiation of pain to back of head, shoulder & arms)
3. Anidra (Sleep Disturbance)
4. +ive x-ray finding of cervical spondylosis(AP & Lateral view)

5. Vertigo

All essential symptoms with atleast one non-essential symptoms will be taken as Inclusion Criteria.

Exclusion Criteria of the patient

1. Patients below age of 25 years and above 64 years of age.
2. Patients not fit for treatment.
3. Extra Cervical Ribs.
4. Patients having injury to Cervical spine.
5. Diabetic Neuropathy.
6. Gouty & Rheumatoid arthritis.
7. Torticollis.
8. Ankylosing Spondylitis.

Criteria of Assessment

Table No. 1- Neck Pain (Greeva Shool).

Grade	Score	Features
0 -nil	0	No neck pain.
+ -mild	1	Occasionally neck pain.
++ -moderate	2	Neck pain aggravates with movement.
+++ -severe	3	Persistent neck pain.

Table No. 2- Stiffness of Neck (Greeva Stambha).

Grade	Score	Features
0 -nil	0	No Stiffness.
+ -mild	1	Stiffness occurs during sleep.
++ -moderate	2	Continuous Stiffness with slight movement.
+++ -severe	3	Continuous Stiffness with restricted movement.

Table No. 3- Paresthesia (Gatra Suptata).

Grade	Score	Features
0 -nil	0	No Paresthesia.
+ -mild	1	Paresthesia in one arm.
++ -moderate	2	Paresthesia in both arm.
+++ -severe	3	Paresthesia in both arm with weakness & wasting of muscles.

Table No. 4- Restricted movement of neck (Greeva Hundana).

Grade	Score	Features
0 -nil	0	Normal movement of neck
+ -mild	1	Restriction of lateral movement of neck.
++ -moderate	2	Restriction of extension, flexion of neck.
+++ -severe	3	Restriction of Lateral, extension & Flexion of neck.

Table No. 5- Radiation of pain to back of head, shoulder & arms (Paniprastha shiroruja).

Grade	Score	Features
0 -nil	0	No Radiation of pain.
+ -mild	1	Radiation of pain to back of head.
++ -moderate	2	Radiation of pain to back of head with one shoulder & arm.
+++ -severe	3	Radiation of pain to back of head with both shoulders & arms.

Table No. 6- Sleep Disturbance (Anidra).

Grade	Score	Features
0 -nil	0	No Sleep disturbance.
+ -mild	1	Disturbed sleep.
++ -moderate	2	Disturbed sleep after 2-4 hrs. of sleeping
+++ -severe	3	Insomnia

Table No. 7- X-Ray finding of cervical spine (AP & Lateral view).

Grade	Score	Features
0 -nil	0	No Radiological change.
+ -mild	1	Loss of lordotic curvature of spine or reduced
++ -moderate	2	Intervertebral disc space or Osteophytes
+++ -severe	3	All findings of grade 1,2

Table No. 8- Vertigo.

Grade	Score	Features
0 -nil	0	No change
+ -mild	1	Getting arise from bed (Plain surface)
++ -moderate	2	Changing/turning position even lying on bed
+++ -severe	3	Continuous

Laboratory Investigation

1. Hemogram (TLC, DLC, ESR, Hb gm%)
2. Urine –routine & microscopic,
3. Serum uric acid,
4. Serum calcium
5. R.A. factor.
6. Liver function test.

7. Renal function test.

8. Blood sugar- (F/PP/R).

9. X-ray of Cervical spine- AP & Lateral view.

10. MRI –Cervical spine (if possible).

ASSESSMENT OF RESULT

The results are assessed on the basis of symptoms relief and improvement in terms of laboratory investigations. The result of present clinical trial is grouped in following categories:

1- Relieved

1- Patient have>75% relief in terms of symptoms.

2- Normal ranges of pathological findings up to follow up period.

3- No recurrence of disease up to follow up period.

2- Improved

1- Patient having improvement between 40-74% clinical symptoms.

2- Pathological findings are improved but not within normal limit.

3- Mild recurrence of disease up to follow up period.

3- Unchanged

1- Patient having improvement less than 40% in term of all clinical symptoms.

2- Pathological findings remain same as before trial.

3- Disease may reoccur.

4. Worsen

1- Patient having increase in presenting symptoms.

2- Increase in frequency of night awakening.

OBSERVATIONS AND RESULT

Table no.9: Comparison of change in Greeva Shool (Neck pain) before and after treatment.

Time interval	Group A (n=28)		Group B (n=27)		Inter Group	
	Mean	±SD	Mean	±SD	z-value[1]	p-value[1]
Day 0	2.50	±0.63	2.37	±0.74	0.51	0.61
Day 90	0.32	±0.47	0.14	±0.45	1.03	0.0001*
Mean Change	2.17±0.68		2.22 ±0. 75			
Intra Group	p-value[2]< 0.0001*		p-value[2]< 0.0001*			

Table No.10: Comparison of change in Greeva Stambh (Stiffness of Neck) before and after treatment.

Time interval	Group A (n=28)		Group B (n=27)		Inter Group	
	Mean	±SD	Mean	±SD	z-value[1]	p-value[1]
Day 0	1.82	±0.81	1.70	±0.77	0.47	0.63
Day 90	0.28	±0.46	0.14	±0.45	1.03	0.29
Mean Change	1.53±0.63		1.55±0.64			
Intra Group	p-value[2]< 0.0001*		p-value[2]< 0.0001*			

Table No. 11: Comparison of change in Gatra Suptata (Parasthesia) before and after treatment.

Time interval	Group A (n=28)		Group B (n=27)		Inter Group	
	Mean	±SD	Mean	±SD	z-value[1]	p-value[1]
Day 0	0.75	±0.70	1.00	±0.68	1.05	0.29
Day 90	0.10	±0.41	0.07	±0.38	0.20	0.84
Mean Change	0.64±0.67		0.92±0.67			
Intra Group	p-value[2]< 0.0001*		p-value[2]< 0.0001*			

Table no. 12: Comparison of change in Paniprastha shiroruja (Radiation of Pain to back of head, shoulders & arms) before and after treatment.

Time interval	Group A (n=28)		Group B (n=27)		Inter Group	
	Mean	±SD	Mean	±SD	z-value[1]	p-value[1]
Day 0	1.67	±0.81	1.59	±0.93	0.19	0.84
Day 90	0.60	±0.99	0.33	±0.96	1.15	0.25
Mean Change	1.07 ±0.97		1.25±0.90			
Intra Group	p-value[2]< 0.0001*		p-value[2]< 0.0001*			

Table No. 13: Comparison of change in Greeva Hundana (Restriction of Neck Movement before and after treatment.

Time interval	Group A (n=28)		Group B (n=27)		Inter Group	
	Mean	±SD	Mean	±SD	z-value[1]	p-value[1]
Day 0	1.85	±0.80	1.88	± 0.69	-0.20	0.84
Day 90	0.07	±0.26	0.07	±0.38	0.19	0.84
Mean Change	1.78±0.78		1.81 ± 0.68			
Intra Group	p-value[2]< 0.0001*		p-value[2]< 0.0001*			

Table No. 14: Comparison of change Anidra (Sleep Disturbance) before and after treatment.

Time interval	Group A (n=28)		Group B (n=27)		Inter Group	
	Mean	±SD	Mean	±SD	z-value[1]	p-value[1]
Day 0	0.82	±0.72	0.62	±0.68	0.91	0.35
Day 90	0.07	±0.26	0.03	±0.19	0.21	0.83
Mean Change	0.75±0.70		0.59 ±0.69			
Intra Group	p-value[2]< 0.0001*		p-value[2] = 0.0002*			

Table No. 15: Comparison of change Vertigo before and after treatment.

Time interval	Group A (n=28)		Group B (n=27)		Inter Group	
	Mean	±SD	Mean	±SD	z-value[1]	p-value[1]
Day 0	0.57	± 0.69	0.44	±0.64	0.62	0.53
Day 90	0.07	±0.26	0.03	±0.19	0.21	0.83
Mean Change	0.50±0.69		0.40±0.63			
Intra Group	**p-value[2] 0.0010**		**p-value[2] 0.0039**			

[1]Mann-Whtiney U test, [2]Wilcoxon signed rank test, *Significant

Table No. 16: Comparision of Biochemical Parameters from before to after treatment between the Groups.

Time interval	Group A(n=28)	Group B (n=27)	p-value[1]
Hb (gm/dl)			
Before	12.0 ± 1.51	11.3 ±1.6	0.13
After	12.3±1.21	11.5 ±1.2	0.012
Mean change, p-value[2]	0.35±1.2 , 0 .14	0.17±1.01, 0.39	
TLC (cells/mm^3)			
Before	8235.7± 871.8	7748.1± 1105.7	0.07
After	7514.2± 891.4	7385.1± 1127.2	0.63
Mean change, p-value[2]	7.21±1192.6, 0.003	3.62±1298, 0.158	
ESR(mm/hr)			
Before	20.7 ±7.35	20.37 ±8.52	0.84
After	17.0 ± 5.74	20.51 ± 5.61	0.025
Mean change, p-value2	3.78 + 6.87, 0.007	0.14 ±7.03, 0.91	
Neutrophil(%)			
Before	65.1 ± 8.00	63.0 ±9.87	0.38
After	64.5 ± 10.5	62.8 ±10.1	0.55
Mean change, p-value[2]	0.60 ±9.52 , 0.738	0.14± 12.0 , 0.950	
Eisnophil (%)			
Before	1.50 ±1.59	1.59 ±1.92	0.84
After	1.14 ±1.20	1.40 ±1.55	0.48
Mean change, p-value[2]	0.35±1.61, 0.252	0.18 ±2.21 ,0.668	
Basophil (%)			
Before	0.03 ±0.18	0.14 ±0.53	0.63
After	0.07 ±0.37	0.07 ±0.38	0.97
Mean change, p-value[2]	0.36 ±0.42, 0.663	0.07±0.67, 0.574	
Monocytes(%)			
Before	0.35 ± 0.73	0.44 ±1.01	0.71
After	0.42 ±0.83	0.07 ±0.38	0.04
Mean change, p-value[2]	0.07± 1.24, 0.764	0.37 ±1.11, 0.096	
Lymphocytes(%)			
Before	33.2 ± 8.18	34.8±10.2	0.53
After	32.0 ±8.82	35.7 ± 7.91	0.10
Mean change, p-value[2]	1.28± 8.2, 0.414	0.92 ±11.5, 0.679	

[1]Unpaired t-test, [2]Paried t-test, *Significant

Table No. 17: Comparison of Random Blood Sugar Level from Before to After treatment between the groups.

Time interval	Group A(n=28)	Group B (n=27)	p-value[1]
Random (mg/dl)			
Before	94.8±21.1	109 ±30.7	**0.08**
After	96.0 ±23.6	97.9 ±27.7	**0.81**
Mean change, p-value[2]	1.22±20.2,0.750	1.22 ±21.2, 0.006	

[1]Unpaired t-test, [2]Paried t-test, [*]Significant

Table No. 18: Comparison of Liver Function Tests from Before to After trial between the groups.

Time interval	Group A(n=28)	Group B (n=27)	p-value[1]
Serum bilirubin (mg/dl)			
Before	0.54 ±0.71	0.38 ± 0.20	0.28
After	0.42 ± .030	0.30 ± 0.15	0.06
Mean change, p-value[2]	0.11 ± 0.66,0.370	0.08 ±0.17,0.020	
Alkaline phosphatatase (IU/L)			
Before	171± 11.6	1.68 ± 21.1	0.54
After	164.8±22.7	145.6±30.8	0.01
Mean change, p-value[2]	6.14 ± 27.3,0.244	2.25 ±31.1, 0.001	
SGOT (IU/L)			
Before	20.6 ±9.56	26.5 ±17.0	0.11
After	20.0 ± 7.2	21.0 ± 6.2	0.59
Mean change, p-value[2]	0.57 ± 10.0,0.766	5.5 ±18.2, 0.127	
SGPT (IU/L)			
Before	26.0 ± 9.9	31.4 ±17.6	0.15
After	24.7 ±7.9	25.3 ± 7.3	0.77
Mean change, p-value[2]	1.21 ±10.5, 0.546	6.11± 19.2, 0.111	

[1]Unpaired t-test, [2]Paried t-test, [*]Significant

Table No. 19: Shows the Comparison of Kidney Function Test (KFT) before & after trial between the groups.

Time interval	Group A(n=28)	Group B (n=27)	p-value[1]
S.Urea(mg/dl)			
Before	22.7 ± 4.2	22.7 ± 3.6	0.99
After	24.1 ±4.5	23.0 ±3.4	0.32
Mean change, p-value[2]	1.44 ±3.5, 0.040	0.33±4.6, 0.708	
S. Creatinine (mg/dl)			
Before	0.87 ±0.17	0.81±0.14	0.18
After	0.88 ± 0.15	0.80 ±0.13	0.06
Mean change, p-value[2]	0.01 ± 0.10,0.599	0.007 ± 0.12, 0.758	

[1]Unpaired t-test, [2]Paried t-test, [*]Significant

Table No. 20: Shows Comparison of S. Uric acid before & after trial between the groups.

Time interval	Group A(n=28)	Group B (n=27)	p-value[1]
S. Uric acid			
Before	4.84 ± 1.38	5.26 ± 1.46	0.27
After	4.62 ± 0.72	4.96± 1.25	0.22
Mean change, p-value[2]	0.22 ± 1.23, 0.352	0.30 ± 1.37,0.258	

[1]Unpaired t-test, [2]Paried t-test, *Significant

Table No. 21: shows Comparison of S. Calcium before & after trial between the group.

Time interval	Group A(n=28)	Group B (n=27)	p-value[1]
S. Calcium			
Before	8.73 ±1.55	8.68 ± 1.23	0.89
After	9.04 ± 1.51	8.92 ± 1.34	0.77
Mean change, p-value[2]	0.31± 0.49, 0.000	0.24 ± 0.48, 0.000	

[1]Unpaired t-test, [2]Paried t-test, *Significant

Table No. 22: Overall improvement in the severity of symptoms.

Group	Relieved (>75% relief)		Improved (75-40% relief)		Unchanged (<40% relief)	
	No. of Pts.	%	No. of Pts.	%	No. of Pts.	%
Group A	20	71.4%	6	21.4%	2	7.1%
Group B	24	88.9%	2	7.4%	1	3.7%

Overall Effect of the Trail Drugs

There was significant relief in both the treatment of group A and group B, but treatment of group B is more significant than group A.

DISCUSSION

Discussion is the most essential phase of any research work. Greeva Stambha has been described as one of the Vata Nanatmaja vyadhi by Acharya Charak. There are many clinical conditions described in the medical texts, which involves the neck region and cervical spine, from which the most common condition is Greeva stambh (Cervical Spondylosis). In Cervical Spondylosis the main pathology is found in the cervical spine especially in the inter-vertrabral discs.

Nidana

As “Greeva Stambha” comes under Vata Nanatmaj Vikar which means purely Vataj vikar like other vata-vikar. So all the factors, which are responsible for the vitiation of Vata can be considered as the Nidana of Greevastambh also. Hence Nidana is divided in six categories

Aharaja, Viharaja, Manasika, Agantuja, Kalaja, Nidanarthaka Nidan. In modern terminology, the factors like dietary habits, poor posture in sitting or sleeping, excessive travelling, Occupational stress, old age, trauma and environment contributed as etiological factors for Greevastambh(Cervical Spondylosis).

Roopa

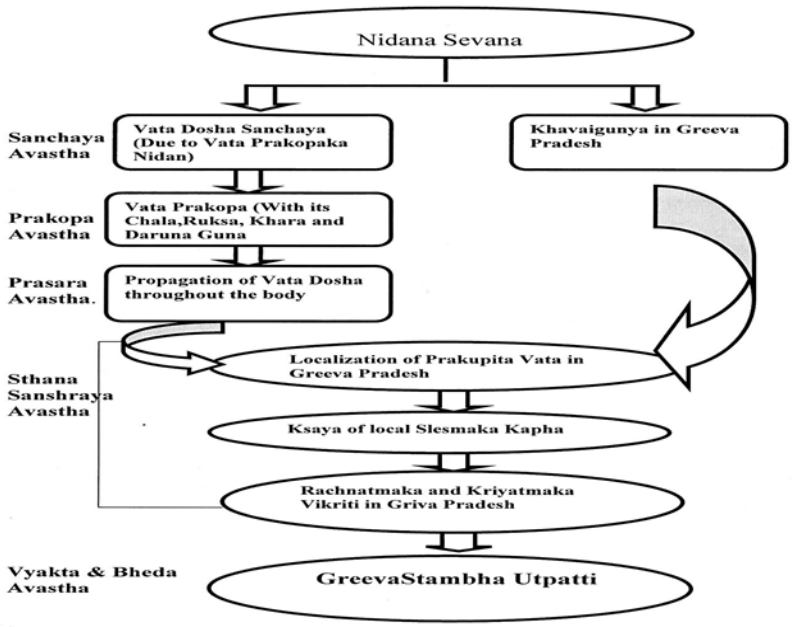
Roopa of Greevastambh (Vata Vyadhies) are compiled from various classics. Among which some symptoms are commonly found in cases of Greeva stambh i.e. Greeva shool, Greeva Stambh, Gatra Suptata, Greeva Hundana, Paniprastha Siroruja, Anidra (Ch.Chi.28).

Samprapti

The knowledge of Samprapti helps in the comprehension of the specific features of a disease like dosha, dushya, srotodushti, vyadhi adhisthan, etc. Samprapti-vighatana is considered as prime treatment of any disease. Although there is no clear description of Samprapti of "Greeva Stambha". But it can be considered on the basis of Samprapti of Vata-Vyadhi.

nsgs lzksrkafl fjDrkfu iwjf;Rok vfuyks CkfyA

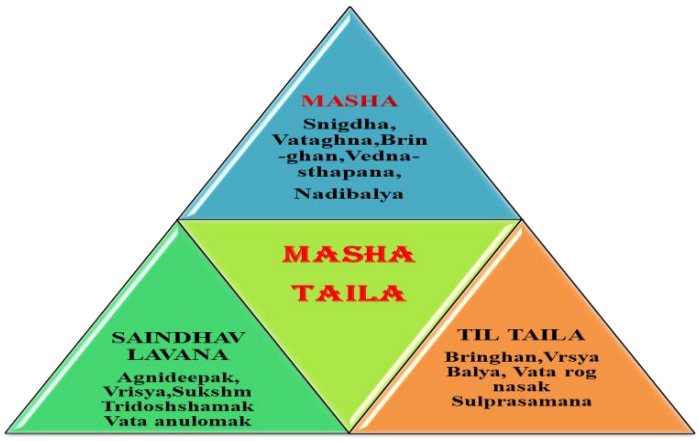
djksfr fofo/kku~ O;kf/ku~ loZ vxa, dkax lfJrku~AA (Ch.Chi.28/18)



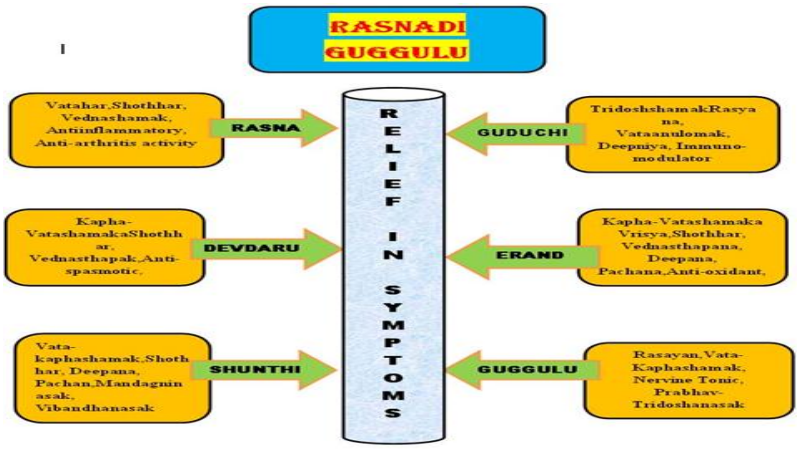
Schemic representation of Samprapti of "Greeva Stambh"

Mode of Action of Drugs used

Mode of Action of Masha taila



Mode of Action of Rasnadi Guggulu



Discussion for Abhyang and Nasya

Abhyang-From the treatment point of view Snehana, & Swedana are highly effective for Vata-vyadhi's. Abhyanga is one of the bahira parimarjana chikitsa which makes Snehana effect. Dalhana commented that around eight hundred matrakala needed for reaching the medicine up to asthi dathu. so abhyanga is performed for around five minutes. **Nasya-** Root of administration always has its own importance in management of any disease. According to Ayurvedic classics the diseases which are occurring above the neck, Nasya therapy is most favourable. Nasya karma is explained as a best treatment for urdhwajatrugata vikara Greeva Stambha is one among them.

For the procedure of Abhyanga and Nasya karma taila is considered better for the treatment of Vatavyadhi. Simple Tila taila can control the vitiated Vata but the medicated taila with Vatahara drugs is more beneficial. Masha taila has been described in Chakradutt as Vatahara.

Discussion on clinical symptoms

Greeva Shool

Considerable relief in the symptoms of Greeva Shool was observed in patients of group A (2.17± 0.68, p<0.0001) and in patients of Group B (2.22± 0.75, p<0.0001). This might be due to (Vednasthapak) analgesic & (Sothhar) anti-inflammatory action of the drugs.

Greeva Stambh

Considerable relief in the symptoms of Greeva Stambh was observed in patients of group A (1.53 ± 0.63, P<0.0001) and in patients of Group B(1.55 + 0.64, p<0.0001). This might be due to snehana guna of Masha Taila used in abhyang and nasya.

Gatra Suptata

Considerable relief in the symptoms of Gatra Suptata was observed in patients of group A (0.64 ± 0.67, P<0.0001) and in patients of Group B (0.92 + 0.67, p<0.0001).

Paniprastha Shiroruja

Considerable relief in the symptoms of Paniprastha Siroruja was observed in patients of group A (1.07 ± 0.97, P<0.0001) and in patients of Group B (1.25 + 0.90, p<0.0001).

Greeva Hundana

Considerable relief in the symptoms of Greeva Hundana was observed in patients of group A (1.78 ± 0.78, P<0.0001) and in patients of Group B (1.81 + 0.68, p<0.0001).

Anidra

Considerable relief in the symptoms of Paniprastha Siroruja was observed in patients of group A (0.75 ± 0.70, P<0.0001) and in patients of Group B (0.59 + 0.69, p<0.0002).

Discussion on Haematological Parameters

All the Haematological parameters except calcium were observed to be within physiological normal limits on Day 0. This indicates that the Cervical Spondylosis was not an outcome of a any pathological error, rather it was result of excessive use and degeneration due to age.

All Haematological parameters were observed within normal limits on Day 90. Thus, the Safety of the trail drugs with respect to renal function, Liver function can be assured.

S.calcium

There was significant mean change in the S.Calcium from before to after treatment in both the groups. This might be due to sukshma, Deepaniya and agnideepak guna of the used trial drug which help in absorption of the calcium to the bones.

Radiological finding of cervical spine

There was no significant changes in Radiological finding such as osteophytes and /or narrowing of joints of both groups was observed after treatment from before treatment because of time bound study of 3 months only, but it checks further progression of disease.

Discussion on Final Result

In Group A, 20 patients (71.4%) were relieved, 6 patients (21.4%) where as 2 patients (7.1%) were not improved by the administration of the trail drugs.

In Group B, 24 patients (88.9%) were relieved, 2 patients (7.4%) where as 1 patient was not improved by the administration of the trail drugs. The statistical comparision between Group A and B reveals that the percentage of relieved patients is higher in group B than in group A. The difference is statistically significant as ($p<0.05$).

CONCLUSION

- Greeva Stambh (Cervical Spondylosis) is Vata dominant vyadhi.
- Acharya Charaka considered Greeva Stambh as one of the Vata Nanatmaja vyadhi.
- Being a type of Vata vyadhi, general Vata provocating factors are accepted as Nidana. Vyana Vayu and Slesmaka Kapha are essential component to produce Asthigata Vata.
- Vitiated Vayu circulates in the Asthivaha Srotas and localised in the Greeva Pradesh, thus produces the Greeva Stambh (Cervical Spondylosis).
- It is characterised by the symptoms – Greeva Shool (Neck pain), Greevastambh (Stiffness of neck), Gatra Suptata (Paresthesia), Greeva Hundana (Restricted movement of neck), Paniprastha shiroruja (Radiation of pain to back of head, shoulder & arms), Anidra (Sleep Disturbance) and Vertigo.
- People with Occupational & postural hazards are more prone to Greeva Stambha (Cervical Spondylosis).
- As far as the symptomatology is concerned, the commonest presenting clinical features are Greeva Shool 60(100%), Greeva Stambh 60(100%), Greeva Hundana 60(100%),

Paniprastha shiroruja 43(71.67%), Gatra Suptata 38(63.33%) Anidra 30(50%) and Vertigo 23(38.33%).

- Greeva Stambh (Cervical spondylosis) is seen more commonly in 24-34yrs **23(38.3%)**, 35-44 yrs **17(28.4%)** followed by 55-64 yrs **11(18.3%)** age group, maximum incidence was observed in female **47(78.33%)** in comparision to male **13(21.67%).**
- The low income group **43(71.67%)** and married persons **52(86.7%)** were mainly affected.
- The disease found commonly distributed among Housewife **30(50%)**, Business Class **9(15%)** followed by Service Class **8(13.33%)** and Students **8(13.33%)**.
- Disease shows insidious nature of onset in **55(91.67%)** patients.
- The maximum no. of patients **38(63.33%)** are of Vata-Kaphaj prakrirti. people having Mandagni **31(51.67%)** & Constipated bowel habit **30(50%).** Most of the patients belong to having sitting nature of work **42(70%)** & were performing no exercise **33(55%).**
- In case of Greeva Stambh the drugs having Vatahara properties should be administered. They should also have the property to prevent the degeneration of bones and promote the regeneration. Keeping this in consideration Masha taila is used for the purpose of both Abhyanga and Nasya karma along with Rasnadi Guggulu.
- The ingredients of Masha Taila were mainly bringhan, shothhar, Vednasthapak due to its Kapha-Vatashamak property.
- The Overall action of all ingredients of Rasnadi Guggulu is shothhar, Vednasthapan, Vatahara, Deepana, Pachan and Vatanulomak.
- Most of the ingredients are Ushna Veerya, possessing Katu-tikita rasa, so they act as Vatahara & Agni –Deepak, where as Masha (Urad) having Guru & snigdha guna provides nourishment.
- Their was no significant changes in Radiological finding such as osteophytes and narrowing of joint space in both groups. Because of time bound study of 3 months only, but it checks further progression of disease.
- No any biological abnormalities have been observed in cases of Greeva Stambh (Cervical Spondylosis) before and after trail.
- The trial drugs were given in 55 selected patients & it was observed that the effect of drugs was dramatically high on the symptoms of Neck pain (Greeva Stambh), Stiffness of neck (Greeva Stambh), Paresthesia (Gatra Suptata), Restricted movement of neck (Greeva Hundana), Radiation of pain to back of head, shoulder & arms (Paniprastha shiroruja)

Sleep Disturbance (Anidra), Vertigo. Grade of all these symptoms shows statistically significant ($p<0.05$) decrease in both the groups but improvement was more in group B than group A.

- Group 'A' 28 patients were given (Abhyang) with Masha Taila along with Rasnadi Guggulu, Out of 28 patients, 20 (71.4%) patients got relieved and 6 (21.4%) patients were improved where as 2 (7.1%) patients remain unchanged.
- Group 'B' 27 patients were given (Nasya) with Masha Taila along with Rasnadi Guggulu, Out of 27 patients, 24 (88.9%) patients got relieved and 2 (7.4%) patients were improved where as 1 (3.7%) patients remain unchanged.
- Masha taila & Rasnadi Guggulu both are effective, that's why both group showed marked improvement.
- The trial drugs did not showed any side effect in present series of cases. So Masha Taila & Rasnadi Guggulu can be safely used to treat the patients of Greevastambh (Cervical Spondylosis).
- The mean values of group B shows more significant results as compared to group A, this may be due to the long standing effect of Nasya karma. This shows Nasya is better than Abhyanga along with Rasnadi guggulu in this study.

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