

TO EVALUATE THE EFFICACY OF *RAKTAMOKSHANA* AND *AANCHHAN KARMA* (LUMBAR TRACTION) IN THE MANAGEMENT OF *GRIDHRASI* W.S.R. TO SCIATICA

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Article Received on
24 December 2024,

Revised on 14 Jan. 2025,
Accepted on 04 Feb. 2025

DOI: 10.20959/wjpr20254-35544



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ABSTRACT

The incidence rate of this disease is significant as more than three-quarters of the world's population experiences lower back pain at some or other time during their course of life and it is the most common cause of sickness which results in the absence from work. It is also a major cause of illness among the working population in a developing country like India. Lack of job satisfaction, depression, obesity, smoking, alcohol, and socioeconomic deprivation have also been found responsible for it. Life time incidence of low back pain is 50-70% and incidence of clinically significant sciatica due to lumbar disc prolapse occurs in 4-6% of the population. In Charaka Samhita Acharya Charaka has described about Gridhrasi. In Maharogadhyaya (Ch.su.20/11) that indicates difficulty to cure it. Gridhrasi is such an entity enumerated fewer than eighty types of Nanatmaja Vataj

Vyadhies. Total 30 patients with sign and symptoms as mentioned in the texts of Ayurveda and modern medical sign like Ruka, Stambh, Toda, Suptata, Sakthiutkshepa Nigraha and confired the diagnosis by Stright leg raising test were treated in two groups for 60 days. 15 patients were treated with Raktamokshana by cupping therapy once a week for 4 weeks. 15 patients were treated with Aanchhan karma (Lumbar traction) daily for 21 days it was observed Raktamokshana gives highly significant relief in Ruja, Stambha, Sakhthi Nikshepa Nigraha and walking time whereas Aanchhan karma gives significant relief in Ruja,

Stambha, Sakhthi. Nikshepa Nigraha and walking time After careful observation it can be concluded that Raktamokshana can produce better relief in sign and symptoms of Gridhrasi than Aanchhan karma.

KEYWORDS: Gridhrasi, Raktamokshana, Aanchhan Karma, Cupping therapy, Lumbar traction

INTRODUCTION

In present era, person are going away from the nature and inviting many diseases in the early stage of life due to disturbed life style. Gridhrasi is one of the them considered as garve disease due to Vata Pradhan Vatavyadhi. Now a days most common disorder which effect the movement of leg particular in middle age is low backache out of which 40% are radiating pain which comes under sciatica syndrome which effects daily routine work.^[1]

The incidence rate of Gridhrasi (sciatica) is quite significant as more than three-quarters of the world's population are affected by the disease. It is characterized by the onset of Ruja (pain), Toda (pricking), and Stambha (stiffness), initially in Sphik (gluteal region) and then radiating distally to Kati-Prishtha (low back), Janu (knee), Jangha (thigh) till Pada (feet). The patients suffering from Gridhrasi have restricted movements due to painful limb, affecting the daily routine activities.^[2]

Sciatica is caused by impingement of the L4, L5, or S1 nerve (from a herniated disk) and manifests as unilateral neuropathic pain extending from the gluteal region down the posterolateral leg to the foot.^[3] In Ayurvedic views there are various method used as a line of treatment like Snehana, Swedana, Basti, Raktamokshana and Agnikarma.^[4]

The conventional treatment for sciatic pain is limited to analgesics and anti-inflammatory drugs. Whereas a wide range of effective treatments both internal and external has been mentioned in Ayurveda. During this clinical study, 30 patinets have been taken in two groups by simple random sampling method. All patients were registered from opd of Shalya Tantra in Shri Khudadaad Dungaji Ayurveda Hospital, Raipur (C.G.).

MATERIAL AND METHOD MATERIAL

Equipments for cupping therapy

Collection of material

1. Cupping set (Cups and Vaccum pump)

2. 24 Number surgical blade
3. Sterile gloves
4. Sterile gauze peice
5. Cotton
6. Betadine solution 5% or 10%
7. Spirit
8. Instrument tray
9. Kidney tray.



Collection of material for cupping therapy

Equipments for lumbar traction-



Traction machine with table

METHODS

The clinical study will be carried under the following divisons

1. Clinical study of the efficacy of Raktamokshana in the management of Gridhrasi.
2. Clinical study of the efficacy of Aanchhan Karma in the management of Gridhrasi.

Study design: Prospective Open Trial Single Arm Non Randomized Interventional Clinical

Study.

Description of the population: Total no. of 30 patient with features of Gridhrasi.

Center: The Research work had done in Shri Khudadad Dungaji Government Ayurved Collage and Hospital Raipur (C.G.).

Number of groups- Group- a

15 patients of this group has been managed by Raktamokshana (Cupping Therapy).

Group-b

15 patients of this group has been managed by Aanchhan Karma (Lumbar Traction).

Number of intervention – 02

Follow-up - All the patients have been followed-up procedure performed after every 15 daysfor 1 month.

INCLUSION CRITERIA

- Age group 20-60 yrs.
- Sex both male and female.
- The patients who present the sign and symptoms of Gridhrasi like Ruka, Stambh, Toda, Suptata etc.
- Primary trauma like lifting heavy weight.
- Controlled Diabetes mellitus and Hypertensive patient.

EXCLUSION CRITERIA

- Severe traumatic injury
- Fibrositis of sacral ligament
- Severe anaemic patients Malnourish patients (as per Age, Height, Weight)
- Haemophilia
- Patient with septicaemia
- Age bellow 20 yr and above 60 yr
- Pregnant women
- Lactating mother
- HIV, HBsAg infection

- Patient with malignancy
- Tuberculosis of spine , hip joint

Procedure of Raktamokshana (Cupping Therapy)

- The location is first shaved if necessary, to ensure a tight seal and avoid bubbling. Pull out gently the valve of cup and then place cup on skin at chosen site.
- Suction pressure is made with the help of vacuum pump by placing it on the top of cup and a vacuum is created. Then remove the pump and press down the valve of cup to make it stick firmly on the skin.
- The cup is left to cling to the skin for 5-10 minutes. The vacuum must be created with adequate pressure. It also works as local anesthesia so the procedure become almost painless. But pressure must not be too much or too little. Too much pressure may cause severe bruising and vesicle formation. Too little pressure doesn't benefitted patient much.
- Then the cup is lifted off and with the help of surgical blade, several small superficial incision of proper distance and depth are made Normally 24 no. Blade is used. But for face and for diabetic patients, 22 no. blade is preferred.
- The cup is placed back immediately and tight seal is created. Blood starts oozing out from cuts and collecting in cup.
- After about 5-7 minute remove cup and clean the skin with cotton swabs. It is necessary because blood has a tendency to clot fast. If we doesn't clean out the site, bloodflow may stop or cease down and patient would be deprived of getting maximum benefit from cupping therapy. Then put cups again for 15-20 minutes or until the flow subsides.
- After 15-20 minutes, cups are removed and cupping site is cleared gently with cotton swab moving in directin of cuts.



Procedure of Aanchhana Karma (Lumbar Traction)

Step 1 – The patient will lie on the traction table in supine position.

Step 2 –The canvas braces will be attached around the iliac crest and lower thoracic region after unlocking the sliding table top.

Step 3- Then the traction weight and duration will be set according to the weight (10%, 30% and 60% of body weight) of patient and chronicity of the disease.^[11]

Step 4 –After setting the mode and unlocking the sliding table Traction Machine will be start.

Step 5 – All patient will be treated with similar traction apparatus .

Step 6 –The patients will be re – evaluated immediately after treatment and daily follow-up.



ASSESSMENT OF RELIEF

Result are assessed from subjective parameters

1. Ruka
2. Stambha
3. Sakthi Utkshepa Nigraha
4. Walking Time.

Gradings

STUDY DESIGN ON ASSESMENT GRADE FOR SUBJECTIVE CRITERIA

1. Ruka (Pain)

No pain	0
Mild Pain - Detected between 1-3 mark on scale (Pain that can easily be ignored)	1
Modrate pain - Detected between 4-6 mark on scale (Pain that cannot be ignored)	2
Severe pain - Detected between 7-10 mark on scale (Pain that cannot be ignored, interferes with daily routine)	3

2. Stambha (Stiffness)

No stiffness	0
Sometimes for 5 min-1hours	1
Daily for 1-2 hours	2
Daily for more than 2 hours	3

3. Sakthiutkshepa Nigraha (SLR test)

Pain at Above 70 of hip flexion	0
Pain at 51 - 70 of hip flexion	1
Pain at 31 - 50 of hip flexion	2
Pain at Below 30 of hip flexion	3

4. Walking Time (to cover 21 meters)

Upto 20 sec	0
Upto 21-30 sec	1
Upto 31-40 sec	2
Upto 41-60 sec	3

OBSERVATION AND RESULT

1. DISTRIBUTION OF 30 PATIENTS OF *GRIDHRASI* BASED ON AGE

Age (In Years)	Group A		Group B		Complete	
	No	Percent	No	Percent	No	Percent
20-30	2	13.3%	2	13.3%	4	13.3%
31-40	5	33.3%	5	33.3%	10	33.3%
41-50	5	33.3%	3	20%	8	26.6%
51-60	3	20%	5	33.3%	8	26.6%
Total	15	100%	15	100%	30	100%

In total 13.3% of patients are belong to 20-30 years of age group, 33.3% of patients are belong to 31-40 years of age group and 26.6% of patients are belong to 41-50 years of age group, 26.6% of patients belongs to 51-60 years of age group.

2. DISTRIBUTION OF 30 PATIENTS OF *GRIDHRASI* BASED ON SEXES.

Sex	Group A		Group B		Complete	
	No	Percent	No	Percent	No	Percent
Male	2	13.3%	3	20%	5	16.6%
Female	13	86.6%	12	80%	25	83.3%
Total	15	100%	15	100%	30	100%

Out of 30 patients, 13.3% of patients are male, 86.6% of patients are female in Group A. In Group B, 20% of patients are male, 80% of patients are female, In total 16.6% of patients are male, 83.3% of patients are female.

3. DISTRIBUTION OF 30 PATIENTS OF *GRIDHRASI* BASED ON WORK PROFILE.

Work profile	Group A		Group B		Complete	
	No	Percent	No	Percent	No	Percent
Strainous	4	26.6%	6	40%	10	33.3%
Unstainous	11	73.3%	9	60%	20	66.6%
Total	15	100%	15	100%	30	100%

Out of 30 patients, 26.6% patients have stainous work, 73.3% patients have unstainous work in Group A. In Group B, 40% patients have stainous work, 60% patients have unstainous work. In total 33.3% patients patients have stainous work, 66.6% patients patients have unstainous work.

4. INCIDNECE OF 30 PATIENTS OF *GRIDHRASI* BASED ON SEVERITY OF *RUKA* (PAIN).

<i>Ruka</i>	Group A		Group B		Complete	
	No	Percent	No	Percent	No	Percent
No pain	0	0%	0	0%	0	0%
Mild Pain - Detected between 1-3 mark on scale (Pain that can easily be ignored)	2	13.3%	1	6.6%	3	10%
Modrate pain - Detected between 4-6 mark on scale (Pain that cannot be ignored)	9	60%	12	80%	21	70%
Severe pain - Detected between 7-10 mark on scale (Pain that cannot be ignored, interferes with daily routine)	4	26.6%	2	13.3%	6	20%

Out of 30 patients, 0% patients have no pain, 13.3% patients have mild pain, 60% patients have moderate pain, 26.6% patients have severe pain, in Group A. In Group B, 0% patients have mild pain, 6.6% patients have mild pain, 80% patients have moderate pain, 13.3% patients have severe pain. In total 0% patients have no pain, 10% patients have mild pain, 70% patients have moderate pain, 20% patients have severe pain.

5. INCIDNECE OF 30 PATIENTS OF *GRIDHRASI* BASED ON *STAMBHA* (STIFFNESS).

<i>Stambha</i>	Group A		GroupB		Complete	
	No	Percent	No	Percent	No	Percent
No Stiffness	0	0%	0	0%	0	0%
Sometimes for 5 min-1hours	5	33.3%	1	6.6%	6	20%
Daily for 1-2 hours	7	46.6%	13	86.6%	20	66.6%
Daily for more than 2 hours	3	20%	1	6.6%	4	13.3%

In total 0% patients have no stiffness, 20% patients have stiffness for 5 min-1 hours, 66.6% patients have stiffness for 1-2 hours, 13.3% patients have stiffness for more than 2 hours.

6. INCIDENCE OF 30 PATIENTS OF *GRIDHRASI* BASED ON *SAKTHI UTKSHEPA NIGRAHA* (SLR TEST).

<i>Sakthi Utkshepa Nigraha</i>	Group A		Group B		Complete	
	No	Percent	No	Percent	No	Percent
Pain at Above 70° of hip flexion	0	0%	0	0%	0	0%
Pain at 51°-70° of hip flexion	4	26.6%	3	20%	7	23.3%
Pain at 31°-50° of hip flexion	8	53.3%	10	66.6%	18	60%
Pain at Below 30° of hip flexion	3	20%	2	13.3%	5	16.6%

In total 0% patients have SLR test positive at above 70°, 23.3% patients have SLR test positive in between 51°- 70°, 60% patients have SLR test positive in between 31°- 50°, 16.6% patients have SLR test positive in below 30°.

7. INCIDENCE OF 30 PATIENTS OF *GRIDHRASI* BASED ON WALKING TIME (to cover 21 meters).

Walking time	Group A		Group B		Complete	
	No	Percent	No	Percent	No	Percent
Upto 20 sec	0	0%	0	0%	0	0%
Upto 21-30 sec	12	80%	13	86.6%	25	83.3%
Upto 31-40 sec	3	20%	2	13.3%	5	16.6%
Upto 41-60 sec	0	0%	0	0%	0	0%

In total 0% patients have walking time upto 20 sec, 83.3% patients have walking time upto 21-30 sec, 16.6% patients have walking time upto 31-40 sec, 0% patients have walking time upto 41-60 sec.

8. ASSESSMENT OF RELIEF FROM *RUKA* (PAIN) IN PATIENTS OF 2 GROUPS.

Group	No of patients	Mean BT	Mean AT			% of Relief		
			7 th	14 th	21 st	7 th	14 th	21 st
A	15	2.13	2.07	2.07	1.13	2.817	2.817	46.948
B	15	2.07	1.93	1.87	1.27	6.763	9.662	38.647

The relief from *Ruka* is 46.94% within 21 days in group A and 2.81%, 2.81% *Ruka* relieved in 7th, 14th days respectively. In group B The relief from *Ruka* is 38.64% within 21 days and 6.76%, 9.66% *Ruka* relieved in 7th, 14th days respectively.

9. ASSESSMENT OF RELIEF FROM STAMBHA (STIFFNESS) IN PATIENTS OF 2 GROUPS.

Group	No. of patients	Mean BT	Mean AT			% Of Relief		
			7 th	14 th	21 st	7 th	14 th	21 st
A	15	1.87	1.80	1.47	1.07	3.743	21.390	42.781
B	15	2.00	1.93	1.73	1.47	3.500	13.500	26.500

The relief from *Stambha* is 42.78% within 21 days in group A and 3.74%, 21.39% *Stambha* relieved in 7th,14th days respectively. In group B The relief from *Stambha* is 26.50% within 21 days and 3.50%, 13.50% *Stambha* relieved in 7th,14th days respectively.

10. ASSESSMENT OF RELIEF FROM SAKHTHI UTKSHEPA NIGRAHA (SLR test) IN PATIENTS OF 2 GROUPS.

Group	No. of patient	Mean BT	Mean AT			% of Relief		
			7 th	14 th	21 st	7 th	14 th	21 st
A	15	1.87	1.80	1.73	1.20	3.743	7.487	35.829
B	15	1.93	1.80	1.73	1.40	6.736	10.363	27.461

Improvement in *sakhthi Utkshepa Nigraha* (SLR test) is 35.82% within 21 days in group A and 3.74%, 7.48% in 7th,14th days respectively. In group B Improvement in *sakhthi Utkshepa Nigraha* (SLR test) is 27.46% within 21 days and 6.73%, 10.36% in 7th,14th days respectively.

11. ASSESSMENT OF RELIEF FROM WALKING TIME IN PATIENTS OF 2 GROUPS.

Group	No. of patients	Mean BT	Mean AT			% of Relief		
			7 th	14 th	21 st	7 th	14 th	21 st
A	15	1.20	1.13	0.87	0.73	5.58	27.75	38.91
B	15	1.13	1.00	1.00	0.87	11.504	11.504	23.009

Improvement in walking Time is 38.91% within 21days in group A and 5.58%, % 27.75% in 7th, 14th days respectively. In group B Improvement in Walking Time is 23% within 21 days and 11.50%, 11.50% in 7th, 14th days respectively.

12. GROUP 'A' STATISTICAL ANALYSIS SHOWING EFFECT OF THERAPY ON VARIOUS SIGN AND SYMPTOMS IN 15 PATIENTS.

No.	Sign and symptoms of subjective parameters	Mean		Difference	% of Relief	Z value	P value	Remarks
		BT	AT					
1	Ruka	2.13	1.13	1	46.948	3.638	0.000	HS
2	Stambha	1.87	1.07	0.8	42.781	2.762	0.006	HS
3	Sakhthi Utkshepa Nigraha	1.87	1.20	0.67	35.829	2.887	0.004	HS
4	Walking Time	1.20	0.73	0.467	38.91	3.500	0.004	HS

13. GROUP 'B' STATISTICAL ANALYSIS SHOWING EFFECT OF THERAPY ON VARIOUS SIGN AND SYMPTOMS IN 15 PATIENTS.

No.	Sign and symptoms of subjective parameters	Mean		Difference	% of Relief	Z value	P value	Remarks
		BT	AT					
1	Ruka	2.07	1.27	0.8	38.647	2.972	0.003	HS
2	Stambha	2.00	1.47	0.53	26.500	2.828	0.005	HS
3	Sakhthi Utkshepa Nigraha	1.93	1.40	0.53	27.461	2.530	0.011	S
4	Walking Time	1.13	0.87	0.26	23.009	2.000	0.046	S

14. ASSESSMENT OF PERCENTAGE OF RELIEF IN 2 GROUPS

Criteria	Group A	Group B
Ruka	46.94%	38.64%
Stambha	42.78%	26.50%
Sakhthi Utkshepa Nigraha	35.82%	27.46%
Walking Time	38.91%	23%

In 21 days, patient of group A got 46.94% of relief from *Ruka* and in case of Group B relief from *Ruka* is 38.64%. 42.78% relief from *Stambha* is seen in Group A and 26.50% of relief is present in Group B in 21 days. In case of *Sakhthi Utkshepa Nigraha* Group A shows 35.82% result and Group B shows 27.46% result in 21 days. In case of walking time 38.91% improvement seen in Group A and 23% result seen in Group B.

15. OVERALL RELIEF

S.N.	Overall Relief	Group A	Group B
1.	Complete Relief (100% Relief)	00%	00%
2.	Maximum Improvement	6.67%	00%

	(> 75% improved)		
3.	Moderately Improvement (50-75% improved)	6.67%	6.67%
4.	Mild Improved (25-50% improved)	66.67%	53.53%
5.	Not Responded (<25% improved)	20%	40%

There were no patient who got 100% complete relief in both group A and group B. In group A, maximum improvement is seen as 6.67% and group B is 00% relief. Moderate improvement in group A is 6.67% and group B is 6.67% relief. Mild improvement in group A is 66.67% and group B is 53.53% relief. In group A 20% got no response and group B 40% got no response.

PROBABLE MODE OF ACTION

Raktamokshana by cupping therapy gives spontaneous relief in the cardinal symptoms of *Gridhrasi* due to release of Impurities or vitiated *Dosha* along with *Rakta Dhatu* also *Raktamokshana* increases the blood circulation to that site and by that increased blood circulation the *Ushna Guna* of *Rakta* was increased, which may acts against the *Sheet Guna* of *Vata Dosha*. Hence Due to opposite *Guna* there will be *Vata Shaman* occur and ultimately will relief the symptoms. Cupping is thought to release chemical transmitters to block pain messages and activate the gate control theory of pain. This is theorized to occur from the vasoconstriction /dilatation occurring under the cup surface.^[5]

In such conditions of *Vata prakopa* which leads due to *Avarana* of *Rakta*, *Raktamokshana* by cupping therapy can remove the *Avarana* of *Rakta dosha* and giving way for *Anulomana* indirectly this ultimately cures the *Vatika* symptoms and patients get instant relief from the pain.^[6] After *Raktamokshana* all vitiated *Dosha* get in normal stat due to removing of *Avarana* of *Kapha* and *Pitta* that results subsidence of pain and stiffness that's why increases the walking time of patient.

Aanchhan Karma (Lumbar traction) has been shown to distraction or separation of the vertebral bodies and reducing spasm. Vertebral separation could provide relief from radicular symptom of sciatica by removing direct pressure or contact forces from sensitised neural tissue.^[7]

Aanchhan Karma (Lumbar traction) helps to separate the spaces between vertebrae. Slightly

separating these bones can help take the pressure of pinched nerves to decrease pain and improve SLR test. Vertebral separation provides relief from pain and stiffness this results improvement of walking time.

DISCUSSION

Gridhrasi is such a *Ruja Pradhan Vata Vyadhi*. In *Charaka Samhita Acharya Charaka* has described about *Gridhrasi*. In *Maharogadhyaya* (Ch.su.20/11) that indicates difficulty to cure it. *Gridhrasi* is such an entity enumerated fewer than eighty types of *Nanatmaja Vataj Vyadhies*. Now a days most common disorder which effect the movement of leg particular in middle age is low backache out of which 40% are radiating pain which comes under sciatica syndrome which effects daily routine work.

A primary cause of morbidity that renders a person unable of doing daily tasks is *Gridhrasi*. This case study demonstrated the management of *Gridhrasi* by *Raktamokshana* and *Aanchha Karma*. The patient's ability to convey the characteristics has increased, and there have been considerable changes in the patient's quality of life. As of right now, the patient is doing well with his regular routines.

There is need to find out quick relief from pain in today era. There are less work have done on the efficacy of *Raktamokshana* (Cupping Therapy) and *Aanchhan karma* (Lumbar Traction). *Raktamokshana* and *Aanchhan karma* works effectively and gives immediate relief in pain of Sciatica. These are simple, cheap, and safe procedure.

There were no patient who got 100% complete relief in both group A and group B. Mild improvement in group A is 66.67% and group B is 53.53% relief. In group A 20% got no response and group B 40% got no response.

The study was conducted in 60 days. During this study no side effect are seen. It is recommended that along with regular exercise and life style modification can be advised to the patient of *Gridhrasi* for better management. Both treatments have mild effect on *Gridhrasi*. Although *Raktamokshana* showed better relief of the signs and symptoms than *Aanchhan Karma*.

CONCLUSION

Raktamokshana and *Aanchhhan karma* has definitely preventive effect on various aspect in the management of *Gridhrasi*. *Raktamokshana* by cupping therapy can remove the *Avarana*

of *Rakta dosha* and giving way for *Anulomana* indirectly this ultimately cures the *Vatika* symptoms and patients get instant relief from the pain. *Raktamokshana* by Cupping therapy increases the blood circulation to that site and by that increased blood circulation the *Ushna Guna* of *Rakta* was increased, which may acts against the *Sheet Guna* of *Vata Dosha*. Hence Due to opposite *Guna* there will be ultimately will relief the symptoms.

Aanchhan Karma (Lumbar traction) has been shown to distraction or separation of the vertebral bodies. Vertebral separation provides relief from pain and stiffness this results improvement of walking time.

Hence, above all description clearly shows that treatment through *Raktamokshana* and *Aanchhan karma* has good result but *Raktamokshana* is excellent. It can be concluded from the above study the trial treatment can be used successfully in the patients.

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