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Clinical study of *Raktamokshana* procedure in the disease *Gridhrasi*

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ABSTRACT

Gridhrasi is one type of *Nanatmaja Vata Vyadhi* as described in *Charaka Samhita*. The signs and symptoms of this disease keep much relationship with those of *Sciatica* according to modern medical science. This disease is a painful neuralgia of Sciatic nerve, in which pain starts from the gluteal region of the patient and radiates down gradually through the back of thigh, knee, calf and outer border of foot. Traditional Ayurvedic medicines applied to alleviate pain of this disease sometimes seem insufficient. In this condition a clinical trial has been done through the application of Multiple Vacuum Syringe Blood Aspiration Procedure (MVSABP) along with the traditional Ayurvedic medicines. *Raktamokshana* is an effective bloodletting therapy. Classically it is described as six types i.e., (1) *Shringa*, (2) *Jalauka*, (3) *Alabu*, (4) *Shiravedha*, (5) *Prachchhana* and (6) *Ghatiyanttra*. In the present study, the Multiple Vacuum Syringe Blood Aspiration Procedure (MVSABP), a combination of *Prachchhana* and *Ghatiyanttra*, is applied to the *Gridhrasi* patients. Total 60 patients are selected for the clinical trial by simple random sampling method from the OPD and IPD of Government Ayurveda College and Hospital, Varanasi, Uttar Pradesh. Two groups are made like Group-A and Group-B, each consisting of 30 patients. Patients of Group-A are treated with only traditional Ayurvedic medicines and patients of Group-B are treated with MVSABP along with traditional Ayurvedic medicines. After one month of treatment, final assessment is done on statistical parameters and the result is incurred.

Key words: *Gridhrasi*, *Sciatica*, *Raktamokshan*, *MVSABP*, *Prachchhana*, *Ghatiyanttra*.

INTRODUCTION

Raktamokshana, one therapeutic procedure of Panchakarma, as described in Ayurveda, consists of six different bloodletting processes like *Shringa*, *Jalauka*, *Alabu*, *Shiravedha*, *Prachchhana* and *Ghatiyanttra*. In present day, this *Panchakarma* therapy is becoming

more and more popular worldwide. New researches are being introduced to this specific branch of Ayurveda in order to meet the necessity and demand in the society. In view of its immediate effect in the treatment of different diseases, it is applied in various specific modified methods to make the rigid procedures simple and more result oriented. Hereby a new procedure has been introduced by combination of *Prachchhana* and *Ghatiyanttra* and a new nomenclature is given to it as Multiple Vacuum Syringe Blood Aspiration Procedure (MVSABP). As *Gridhrasi* is a painful neural disorder, specifically to observe the pain-relieving efficacy as well as other therapeutic effects, this procedure is applied here for the clinical study on it.

In Ayurveda, the diseases of *Nanatmaja Vata-Vyadhi* occupy a vital position. Among them *Gridhrasi* vis-a-vis *Sciatica* is prominent one. This is a very painful neurological disorder which occurs due to different

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pathologies of Sciatic Nerve. So, it is also called as Sciatic Neuralgia. Now-a-days, this disease has become a common phenomenon in the human life, perhaps due to busy and irregular life style of human beings. Traditional Ayurvedic medicines indicated for *Vata-Vyadhi Chikitsa* are found very effective in most of the cases of *Gridhrasi* treatment. But in some cases, where only these medicines seem insufficient, the above mentioned MVSABP is applied with a view to derive the expected result.

AIMS AND OBJECTIVES

1. To assess the effectiveness of *Raktamokshan* procedure (Multiple Vacuum Syringe Blood Aspiration Procedure - MVSABP) among *Gridhrasi* patients.
2. To study the mechanism of *Raktamokshan* procedure (Multiple Vacuum Syringe Blood Aspiration Procedure - MVSABP) among *Gridhrasi* patients.
3. To compare the efficacy of *Raktamokshan* procedure (Multiple Vacuum Syringe Blood Aspiration Procedure - MVSABP) with traditional Ayurvedic Medicinal treatments among *Gridhrasi* patients.

Hypotheses

H₀ - There is no difference in efficacy of various parameters between two treatments at different time of intervention.

H₁ - MVSABP along with traditional treatment is more effective than only traditional Ayurvedic Medicines at different time of intervention.

MATERIALS AND METHODS

In this present procedure of *Raktamokshan*, the following materials are used.

1. Disposable plastic syringe of 10 ml. size (specially designed): 5
2. Pointed surgical blade of No. 11 size: 2
3. Disposable needle of No. 18 size: 2
4. Surgical Spirit: 1 bottle (50 ml.)

5. Cotton roll: 2 small bundles
6. Bandage: 2 small rolls
7. Micropore (1 inch width): 2 rolls
8. Gloves (As per the hand size of the physician): 2 pairs
9. Any anti septic gel of colloidal silver: 1 tube
10. A.T.T. Inj. With syringe: 1 set

Selection of Patients

Irrespective of caste, creed, gender and religion, patients of *Gridhrasi*, coming to the OPD and IPD of the Hospital of Government P. G. Ayurveda College and Hospital, Varanasi, Uttar Pradesh within the age group of 20 years to 60 years, are selected by simple random sampling method for experimental study.

Inclusion criteria

1. Pain

- a) Buttock.
- b) Radiating to lumbar and back side.
- c) Coming down to the outer boarder of the feet.
- d) Pain in systematic ways (Uru, Janu, Jnagha and Pada).

2. Neuro-muscular deformity

- a) Muscular Wasting (Mamsa Shosha).
- b) Paraesthesia.
- c) Stiffness and numbness (in affected parts).

3. Movements

- a) Total loss of walking.
- b) Partial loss of walking.
- c) Normal walking.

4. Diagnostic Signs

- a) S.L.R.
- b) Lasegue's Sign.
- c) F.N.S.T.

5. Specific Clinical Jerks

- a) Ankle Jerk.
- b) Knee Jerk.
- c) Planter Reflex.

6. Specific Clinical Tests of Foot

- a) Weakness of inversion of foot.
- b) Weakness of eversion of foot.
- c) Weakness of planter flexion of foot.
- d) Weakness of dorsiflexion of foot.

7. General Symptoms

- a) *Tandra* (Drowsiness).
- b) *Angagaurava* (Heaviness of the body).
- c) *Mukhapraseka* (Salivation).
- d) *Aruchi* (Anorexia).
- e) *Bhaktadwesa* (Aversion of the food).

8. Aggravation of pain

- a) By Coughing.
- b) By Sneezing.
- c) By Defecation.

9. Loss of Sensation

- a) On the dorsum of foot.
- b) Lower outer portion of the leg.
- c) Lower inner portion of the leg.
- d) Outer border of the foot.
- e) Outer portions of the leg.

10. Walking Time Test: For this purpose patient is asked to walk 25 feet distance in a straight line with full speed and the time taken is recorded with the help of a stop watch in seconds.

11. Ladder Raising Test: Patient is asked to climb some stair cases and the time taken is noted out.

12. Leg Pressure Test: Patient is asked to keep pressure on the weighing machine by the affected

foot and the pressure is calculated according to kilograms.

Exclusion Criteria

- Patients below 20 yrs age and above 60 yrs of age.
- Patients of any infectious/contagious disease, skin disease, heart disease and diabetes mellitus etc.
- Patients of both hypertension and hypotension.
- Patients of any fatal diseases.
- Patients of Psychological disorders.

Plan of the Study

- Total Number of selected patients: 60.
- Randomly, all patients are put in two groups, like Group-A and Group- B, each group consisting of 30 patients.
- Group- A : Traditional Ayurvedic Medicines.
- Group- B : *Raktamokshan* (MVSABP) along with Traditional Ayurvedic Medicines.

Duration of treatment: (in both Groups) : 30 days.

Assessment (in both Groups)

- 1st Assessment: on 1st day.
- 2nd Assessment: on 15th day.
- 3rd Assessment: on 30th day.

Procedure applied in Raktamokshan

The area below the medial malleolus of both the legs, are selected for *Raktamokshan* of *Gridhrasi* patients, which is devoid of any visible vessels, bony parts and *Marma Sthanas*. First of all, a circle is made by the ball-pen in that area to ensure the limitation of the circumference of the cut end of the disposable syringe. Then that area is cleaned with surgical spirit soaked in the cotton piece. After the complete evaporation of the spirit when skin becomes dry, within the circles, the skin is scrapped very superficially with the help of pointed (No. 11 size) surgical blade, which bleeds automatically to a little bit. Immediately the cut end of vacuum syringe is fixed on the skin befitting to the circle made by ball-pen. By using five disposable syringes, maximum up to 50 ml. of blood is aspirated.

After 15 days, the same procedure is repeated in both sides of vertebral column at the lumbo-sacral region.

Raktamokshan (MVSABAP) from both sides of vertebral column at the lumbo-sacral region is as follows.

OBSERVATION

Observation of Group-A

Table 1: Showing the statistical evaluation of patients of Group-A.

Group (A)	N	Mean Score	Std. Dev.	S.E.	Relief %	Wilcoxon(Z)	p-value	Results	
Pain	BT	307	2.4	0.68	0.012	43.24	-4.10	<0.001	HS
	AT	300	1.4	1.07	0.20				
Joint Pain	BT	300	1.2	0.66	0.12	33.33	-3.00	0.003	S
	AT	300	0.8	0.71	0.13				
Tenderness	BT	300	1.1	0.48	0.09	39.39	-3.61	<0.001	HS
	AT	307	0.6	0.66	0.12				
Walking Aid	BT	303	0.3	0.61	0.11	10.00	-1.00	0.317	NS
	AT	300	0.3	0.60	0.11				
Joint Involvement	BT	307	1.5	1.01	0.18	27.66	-3.00	0.003	S

	AT	303	1.1	1.11	0.20				
Swelling	BT	300	1.2	0.71	0.13	41.67	-3.64	<0.001	HS
	AT	300	0.7	0.84	0.15				
Muscle Power	BT	300	0.2	0.41	0.07	50.00	-1.73	0.083	NS
	AT	300	0.1	0.31	0.06				

Table 2: Showing the statistical evaluation of patients of Group-A.

Group (A)	N	Mean Score	Std. Dev.	S.E.	Relief %	Wilcoxon(Z)	p-value	Results	
Muscle Wasting	BT	307	0.2	0.52	0.10	25.00	-1.41	0.157	NS
	AT	300	0.2	0.48	0.09				
Posture	BT	303	1.1	0.51	0.09	44.12	-3.87	<0.001	HS
	AT	303	0.6	0.76	0.14				
Disability	BT	303	1.0	0.49	0.09	41.94	-3.61	<0.001	HS
	AT	300	0.6	0.72	0.13				
Aggravation of Pain	BT	303	1.2	0.63	0.11	62.16	-4.41	<0.001	HS
	AT	307	0.4	0.73	0.13				
SLR	BT	307	1.3	0.49	0.09	51.22	-4.19	<0.001	HS
	AT	307	0.6	0.80	0.15				

FNST	B	3	0.2	0.	0.	50.00	-1.73	0.083	NS
	T	0	0	41	07				
	A	3	0.1	0.	0.				
	T	0	0	31	06				

Observation of Group-B

Table 3: Showing the statistical evaluation of patients of Group-B.

Group (B)	N	Mean Score	St. Dev.	S. E.	Relief %	Wilcoxon(Z)	p-value	Results	
Pain	B	3	2.57	0.63	0.01	85.71	-4.79	<0.001	HS
	T	0	0	7	11				
	A	3	0.37	0.72	0.13				
	T	0	0	7	13				
Joint Pain	B	3	0.60	0.50	0.09	83.33	-3.87	<0.001	HS
	T	0	0	9	0				
	A	3	0.10	0.31	0.06				
	T	0	0	3	6				
Tenderness	B	3	0.97	0.41	0.08	89.66	-4.74	<0.001	HS
	T	0	0	7	8				
	A	3	0.10	0.31	0.06				
	T	0	0	3	6				
Walking Aid	B	3	0.37	0.49	0.09	100.00	-3.32	0.001	S
	T	0	0	7	9				
	A	3	0.00	0.00	0.00				
	T	0	0	0	0				
Joint Involvement	B	3	0.90	0.96	0.18	77.78	-3.70	<0.001	HS
	T	0	0	0	8				
	A	3	0.20	0.66	0.12				
	T	0	0	6	2				

Swelling	B	3	0.70	0.47	0.09	80.95	-4.12	<0.001	HS
	T	0	0	47	9				
	A	3	0.13	0.35	0.06				
	T	0	0	3	6				
Muscle Power	B	3	0.30	0.53	0.10	88.89	-2.83	0.005	S
	T	0	0	53	0				
	A	3	0.03	0.18	0.03				
	T	0	0	3	3				

Table 4: Showing the statistical evaluation of patients of Group-B.

Group (B)	N	Mean Score	St. Dev.	S. E.	Relief %	Wilcoxon(Z)	p-value	Results	
Muscle Wasting	B	3	0.30	0.47	0.09	88.89	-2.83	0.005	S
	T	0	0	47	9				
	A	3	0.03	0.18	0.03				
	T	0	0	3	3				
Posture	B	3	1.17	0.38	0.07	94.29	-5.26	<0.001	HS
	T	0	0	7	7				
	A	3	0.07	0.25	0.05				
	T	0	0	7	5				
Disability	B	3	1.03	0.18	0.03	100.00	-5.40	<0.001	HS
	T	0	0	3	3				
	A	3	0.00	0.00	0.00				
	T	0	0	0	0				
Aggravation of Pain	B	3	1.53	0.68	0.12	95.65	-4.83	<0.001	HS
	T	0	0	68	2				
	A	3	0.07	0.25	0.05				
	T	0	0	7	5				

SLR	B	3	1.5	0.	0.	91.	-4.84	<0.	HS
	T	0	7	68	12				
FNST	A	3	0.1	0.	0.	66.	-1.41	0.1	NS
	T	0	3	35	06				
	A	3	0.0	0.	0.				
	T	0	3	18	03				

4	No Improvement	25% & Less	3	10	2	6.	5	8.
	Total		30	10	30	10	60	10
				00		00		00

RESULT

Group – A

- 1. Maximum Improvement: - 08 Patients.
- 2. Moderate Improvement: - 07 Patients.
- 3. Mild Improvement: - 12 patients.
- 4. No Improvement: - 03 patients.

Group – B

- 1. Maximum Improvement: - 14 Patients.
- 2. Moderate Improvement: - 08 Patients.
- 3. Mild Improvement: - 06 patients.
- 4. No Improvement: - 02 patients.

Table 5: Showing the result of both the Groups.

S N	Results	Range	(Group A)		(Group B)		Total	
			No of Pt.	%	No of Pt.	%	No of Pt.	%
1	Maximum Improvement	75% & Above	8	26.7	14	46.7	22	36.7
2	Moderate Improvement	50 % to 75%	7	23.3	8	26.7	15	25.0
3	Mild Improvement	25% to 50%	12	40.0	6	20.0	18	30.0

Critical Analysis

From Ayurvedic point of view, *Vata Dosa* is a primary factor of pain in any type of disease. It becomes aggravated either due to *Dhatu Kshaya* or due to *Margavarodha*. In case of *Gridhrasi*, *Kapha Dosa*, in its vitiated form, obstructs in the minute channels causing *Srotavarodha*. So *Vata Dosh* is aggravated in the body, thereby increasing pain in the body. In Raktamokshana, blood is aspirated from the nearby peripheral areas in to the vacuum syringe. Along with this blood, the vitiated *Kapha Dosa*, which creates *Srotavarodha*, is also aspirated in to the syringe and blood circulation is re-established due to cleansing of the channels. In this way, *Shodhana* of both *Vata Dosa* and *Kapha Dosh* are done. *Pitta Dosa* remains with *Rakta Dhatu* in the relation of *Ashraya-Ashrayi Bhava*. So by the aspiration of blood (*Rakta Dhatu*), *Shodhana* of *Pitta Dosa* is also done. Ultimately *Raktamokshana* procedure by the vacuum syringe method performs the *Shodhana* of *Tridos* (*vata, Pitta* and *Kapha*). By *Shodhana* of *Vata Dosa*, pain of the concerned disease (*Gridhrasi-Sciatica*) is relieved. This is a hypothesis regarding the relief of pain in case of *Gridhrasi*.

From modern point of view, pain occurs in *Sciatica*, either due to the cessation of blood circulation to a particular area or due to compression of nerve at any place during its course of innervations. Some other factors of pain may be there in different conditions. But so far as the disease, *Gridhrasi* is concerned the above-mentioned factors are responsible for pain. In this condition, by Raktamokshana procedure peripheral blood circulation is re-established to a great extent and it eradicates the cessation of blood circulation to the area of congestion. In case of compression when the blood circulation of a particular area becomes patent, the auto immune system of the body relieves the

mechanical external compression to some extent. There by it relieves the pain.

CONCLUSION

As Sciatica is a painful disease, it is best managed by MVSABP along with Traditional Medicine. This is a unique effort of comparing the efficacy of *Raktamokshan* in *Gridhrasi* (Sciatica) patients through the Multiple Vacuum Syringe Blood Aspiration Procedure (MVSABP) than the traditional Ayurvedic Medicines only. So, this new procedure of *Raktamokshan* seems as a boon in the treatment of *Gridhrasi vis-à-vis* Sciatica.

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