

A clinical study on the management of *Arshas* (Prolapsed Piles) by *Jaloukavacharana*

Research Article

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Abstract

Background: *Arshas* is one among the *Mahagadas* (major diseases) which causes pain and obstruction in the anal passage. It is a *rakta* and *mamsa doshaja vyadhi* (disease related to blood and muscle). *Arshas* can be correlated to hemorrhoids. It is caused due to the varicosity of hemorrhoidal plexus which makes it a surgically curable disease. In *Ayurveda*, various treatments have been mentioned for the management of *arshas* (hemorrhoid) such as *chedhana* (excision), *sweda* (sudation), etc among which *Visravana* or *raktamokshana* (blood-letting therapy) plays an important role. *Jalaukavacharana* (leech therapy), a type of *Asashtra krita Visravana* (non-invasive blood-letting) has been mentioned as an alternate, non-surgical measure in the management of *arshas* (hemorrhoid). The *arshas* (hemorrhoids) which are swollen, prolapsed and containing more quantum of stagnated blood inside can be managed by leech therapy. The saliva of leech contains an anti-coagulant factor – Hirudin and a spreading factor – Hyaluronidase, which act as anesthetic and anti-inflammatory, thereby helping in the treatment of *arshas* (hemorrhoid). In the present study, *raktamokshana* (blood letting) was performed with *jalauka* or leech in patients with prolapsed pile mass. Materials and method: 30 patients fulfilling the assessment criteria were selected for the study. Result and conclusion: In the present study 26 patients were completely cured, 3 patients were cured with presence of mild symptoms and 1 patient had improvement from severe symptoms to moderate symptoms. Therefore, *Jalaukavacharana* (leech therapy) can give promising results in the management of prolapsed piles.

Key Words: *Ayurveda, Sushruta, Arshas (hemorrhoid), Jalauka, Leech, Piles, Rakta.*

Introduction

Arshas (hemorrhoid) refers to muscle like fleshy projections which kill the life like an enemy and create obstruction in the anal passage.(1) *Susrutha* has enumerated *arshas* (hemorrhoid) under *rakthaja* and *mamsa doshaja* diseases. The vitiated doshas spread and traverse downwards through main *dhamani* i.e. channel to reach *guda* (anus) where they vitiate the *valis* (sphincter), giving rise to fleshy shoots specially when the individual is suffering from *mandagni* (slow digestive power). Premonitory symptoms like sour belching, heart burn, excessive thirst, peri-orbital oedema, intestinal gurgling, cutting pain in the anus, etc are also mentioned by *Acharyas Sushruta* and *Caraka*. (2,3)

Piles refers to a Latin word *Pila* which means a ball.(4) It is the varicose condition of the Hemorrhoid plexus of veins situated in the lower portion of the rectum and in the anal canal. Such hemorrhoids may be external or internal. When located above the Hilton's

line, it is called as internal piles which is covered by mucous membrane and when located below the Hilton's line, it is called as external piles which is covered with skin.(5)

General management of piles includes prevention in the form of advice to keep bowels regular, eat enough vegetable and fruits and avoid irritant purgatives. Injection Therapy is the treatment for uncomplicated internal piles. Whereas, for longstanding hemorrhoids with severe prolapse, surgeries like excision, ligation, cauterization, cryo-surgery, etc are required.

In *Ayurveda*, management protocol of *arshas* (hemorrhoid) includes *bheshaja* (medicines), *kshara karma* (caustic therapy), *agnikarma* (cauterization) and *raktamokshana* (blood-letting). Among these, *raktamokshana*(blood-letting) plays a vital role in the treatment of *arshas* (hemorrhoid). *Acharya Vagbhata* mentions the usage of *jalauka* (leech)s, knives and brush needles for eliminating the vitiated blood.(6) *Jalaukavacharana* (leech therapy), a form of *anusastra visravana raktamokshana* (non-instrumental blood-letting) is a non-invasive procedure in which *avisha jalauka* (non-poisonous leeches) are used for blood-letting.

Aims and Objectives

To evaluate the effect of Leech therapy in the management of prolapsed piles.

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Materials and Methods

The patients were selected from the Out-Patient Department of Post-graduate Unit of Shalya at Government Ayurvedic Hospital, Erragadda. Total of 30 subjects with the signs and symptoms of thrombosed piles were included in the study.

Inclusion criteria

Subjects irrespective of age, sex and chronicity of piles.

Exclusion criteria

Subjects with associated systemic diseases.

Assessment of Subjective and Objective Criteria

Each symptom was observed in various patients as mild, moderate and severe. (Table 1)

Subjective criteria

1. Pain in the anal region
 - No pain - 0
 - Mild – during defecation only -1
 - Moderate – present after defecation upto 1 hour -2
 - Severe – continuous pain after defecation for more than 1 hour - 3
2. Pruritus
 - No pruritus - 0
 - Mild – during defecation only -1
 - Moderate – present after defecation upto 1 hour -2
 - Severe – continuous itching after defecation for more than 1 hour -3

OBJECTIVE CRITERIA:

1. Bleeding per rectum
 - Mild – 1-2 droplets of blood during defecation
 - Moderate – blood more than drops during defecation
 - Severe – Splash on the pan
2. Mucus discharge – based on cotton pad
 - Mild – 1-2 cotton pads
 - Moderate – 3-4 cotton pads
 - Severe – more than 4 pads
3. Severity according to number of pile masses
 - Mild – 1 pile mass
 - Moderate – 2 pile masses
 - Severe – 3 pile masses

Each symptom was observed in various patients as mild, moderate and severe. (Table 1)

Table 1: Showing the number of patients with different symptoms and their severity

Symptom	Mild	Moderate	Severe
Bleeding	20	6	4
Pain	22	6	2
Mucous discharge	18	9	3
Pruritus	19	8	3
Severity based on pile mass	12	14	4

Investigations

Hematological examination:

TC, DC, ESR, HB%, Bleeding time, Clotting time, etc. were recorded.

Stool examination

Stool examination was done to rule out for ova, cysts and occult blood.

Method of leech application

Poorva karma (Pre-operative procedure)

The patient was made to lay down in lithotomy position and the part was cleaned with warm water. Thereafter mopped by the sterile cotton swab. The patient was asked to strain if the masses are not protruding and perianal region was stretched well by the assisting hand for well visualization of the pile mass.

Pradhana karma (Operative procedure)

The leech was held in a wet cotton swab by exposing its mouth part outside and was made close contact over pile mass. After the leech started sucking blood, its body was covered with a wet cotton gauze. Likewise single leech was applied over each pile mass. The leeches were allowed to suck the blood for 5-10 minutes and then removed by putting *saindhava lavana* (rock salt) powder or *haridra* (turmeric) powder.

Paschat karma

Care of the patient: Pressure bandage was applied to the site after the removal of leech. The bandage was removed on next day to observe the pile mass. Temperature, pulse, blood pressure, heart rate and respiration rate were noted.

Care of jalauka (leech): The leech was made to vomit the sucked blood by sprinkling the *haridra choornam* (turmeric powder) over its mouth and by milking method. The used leech was kept in a separate jar containing fresh water for the next application in same patient.

Repetition of this procedure was done according to the severity of the disease. In severe condition leeches were applied on every alternate day and in less severe cases it was applied weekly once.

Observations and Results

Among the total number of cases, 22 were males and 8 were females. The total cases have been divided into four age groups, where the lower limit of age was 21 years and the upper age limit was 60 years. Table 2 shows the age wise distribution.

Table 2: Showing the number of patients in different age groups

Sl.No.	Age group	No. of patients	Percentage
1	21 – 30 years	8	26.66%
2	31 – 40 years	12	40%
3	41 – 50 years	6	20%
4	51 – 60 years	4	13.33%

The disease Arshas was seen predominantly in male patients compared to female. Out of 30 patients 8 female were reported and 22 male patients were recorded as shown in table 3.

Table 3: Showing the number of patients according to gender

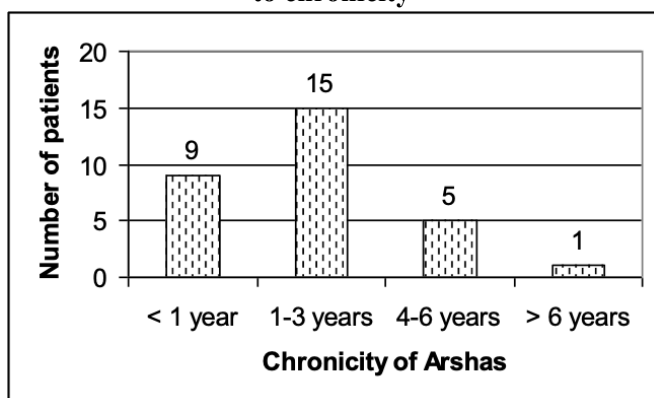
Sl.No.	Gender of Patients	No. of patients	Percentage
1	Male	22	73.33%
2	Female	8	26.66%

Based on the chronicity of the disease, 50% of the patients had chronicity of 1-3 years. Table 4 and Graph 1 show the number of patients according to the chronicity of arshas.

Table 4: Showing the number of patients according to chronicity

Sl.No.	Chronicity of Arshas	No. of patients	Percentage
1	Less than 1 year	9	30%
2	1 – 3 years	15	50%
3	4 – 6 years	5	16.66%
4	Above 6 years	1	3.33%

Graph 1: Showing the number of patients according to chronicity



The nature of work was also taken into account to analyse the patients with respect to their occupation and were made into 3 groups as shown in table 5.

1. Sedentary - In the sedentary nature of work mainly shop keepers, drivers, clerks, software engineers and the other work in which there is continuous sitting position is required were included and their number is 15.
2. Moderate - Moderate type means middle class group like housewives, teachers etc. were included whose number is 10.
3. Hard working - Hard work includes farmers, rikshaw pullers and labourers etc. and their number is 5.

Table 5: Showing the type of work of the patients involved in the study

Sl.No.	Type of work	No. of patients	Percentage
1	Sedentary	15	50%
2	Moderate	10	33.33%
3	Hard working	5	16.66%

Out of 30 cases, 9 patients found to be vegetarian, where as the non-vegetarian consisted of 21 patients as shown is table 6.

Table 6: Showing the number of patients according to their dietary habit

Sl.No.	Diet habit	No. of patients	Percentage
1	Vegetarian	9	30%
2	Non-vegetarian	21	70%

The results were assessed on the following basis and grades.

- Reduction of the pile mass / masses and absence of other symptoms were indicated as completely cured.
- Regression of mass / masses with presence of mild other symptoms as cured (even during defecation also no masses were prolapsed).
- Considerable regression in size of the mass / masses with improvement to moderate symptoms from severe symptoms as improved.
- No change in the size of the mass and symptoms as poor response.

Table 7: Showing the result of treatment of patients of the present study

Sl.No.	Results	No. of patients	Percentage
1	Completely cured	26	86.66%
2	Cured	3	10%
3	Improved	1	3.33%
4	Poor response	-	

Discussion

In the present clinical study, 30 cases were selected for leech therapy according to random method. The type of piles in all the cases were prolapsed.

The clinical analysis shows that the cases with short duration of mass prolapse were improved in 3 or 4 sittings. The patients with less duration of the illness showed more, quicker response than the chronic one. Sedentary habit and non-vegetarian diet played an important role in the present study and the restriction of these factors shown early response.

The age of the patients ranges between 21-60 years are included in this trial. The maximum number of patients found in the age group of 31-40 years are 12 in number and minimum number of patients in the age group of 51-60 years are 4 in number.

As per the nature of the work the patients were divided into 3 groups – Sedentary, Moderate and Hard work. In Sedentary and Moderate work consists of 25 patients. In the group Sedentary and Moderate nature of work shows the higher incidence of disease. This type of work requires continuous sitting position which points to main etiological factors of the arshas. Due to prolonged sitting there will be continuous pressure on the hemorrhoid plexus leading to engorgement of veins.

In food habit incidence, patients were divided into two groups as Vegetarian and Non-vegetarian. Non-vegetarian food habits shows a higher chance of disease, i.e. in 21 patients and less chance in vegetarian food habit 9 patients. This shows that non-vegetarian food habit was more prone to vitiation of blood and initiation of etiological factors of the disease than in

vegetarians. In non-vegetarian food there is animal protein, which is the causative factor for constipation.

Among the 30 patients, 26 patients were completely cured with reduction of pile masses and no other symptoms. 3 patients had regression of pile masses and mild other symptoms. One patient had considerable reduction in size of the pile mass and

improvement in other symptoms from severe to moderate. It can be observed that 86.66 % were completely cured, 10% cured with mild symptoms and 3.33% had improved conditions.

The study is statistically significant. Table 8 shows the statistical data before and after jaloukavacharana.

Table 8: Statistical data before and after treatment

Parameter	Mean		SD		SE		T value	P value	Significance
	BT	AT	BT	AT		AT			
Pain	1.47	0.17	0.73	0.46	0.13	0.08	11.9477	0.0001	Extremely statistically significant
Bleeding	1.47	0.1	0.73	0.31	0.13	0.06	11.1946	0.0001	Extremely statistically significant
Mucous discharge	1.50	0	0.68	0	0.12	0	12.0416	0.0001	Extremely statistically significant
Pruritis	1.47	0	0.68	0	0.12	0	11.7886	0.0001	Extremely statistically significant
Size of the mass	1.73	0	0.69	0	0.13	0	13.7295	0.0001	Extremely statistically significant

Probable mode of action

Rakthamokshana (blood-letting therapy) is indicated in *pitta rakta dushti rogas* (diseases caused due to vitiated pitta and blood) by different methods. Leech therapy which is one among them, is a productive *amushalya chikitsa* (para-surgical procedure) in prolapsed piles, originated by vitiation of *pitta* and *rakta*.(7)

The leech sucks the stagnated blood from prolapsed pile mass thereby reducing the congestion inside the engorged hemorrhoidal veins, reducing the size of the mass/masses, relieving the mucous discharge and pruritus.(8)

When the leech bites various glands present in its buccal cavity secrete several biologically active substances into the prolapsed pile mass. Hirudin, an anti-coagulant agent spreads to the site of the bite and helps to prevent the coagulation of blood over the bleeding surface.(9)

Hyaluronidase, which is another pharmacologically active substance secreted in the leech serves as a spreading factor at the site of bite. It increases the tissue permeability, thereby free movement of intracellular fluid. It helps in relieving the internal tension and pruritus.(10)

Proteinase inhibitors such as bdellins, trypsin-plasmin inhibitors and eglins, inhibitors of chymotrypsin, subtilisin and the granulocytic neutral protease, elastase and cathepsin-G, also secreted from the leech may have anti-bacterial, anti-thrombotic and anti-fibrinolytic activities, which relieve the inflammation over the pile mass.(11)

MMP-9 was found to be over expressed in hemorrhoids.(12) Leech therapy may also act on matrix metalloproteinase (MMP), which is a zinc-dependent proteinase and a potent enzyme capable of degrading extracellular proteins.

Conclusion

Leech therapy is proved as an effective, non-hazardous, simple, and ambulatory non-surgical management for a surgical problem. In the present study on *jaloukavacharana* (leech therapy) in *arshas* (hemorrhoid), around 87% patients were completely cured. The advantage of leech therapy is its simplicity in its application without any complication and further no hospitalization is required. Therefore, *jaloukavacharana* (leech therapy) can give promising results in the management of *arshas* (hemorrhoids).

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