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Conservative Management Of Acute Prolapsed External Haemorrhoids By Leech Therapy And Adjuvant Ayurvedic Medicines- A Single Case Study

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Abstract

Back ground: Haemorrhoid is defined as prolapse of an anal cushion that may result in bleeding and pain from rectum or anal canal. It is classified into Internal and External Haemorrhoids. Further, prolapsed haemorrhoid is an emergency condition which require immediate surgical intervention. If it is not treated properly, the condition becomes worse after thrombosis and strangulation of the pile mass. Haemorrhoid can be co-related with *Gud-Arsha* in *Ayurveda*. Sushruta has advocated fourfold therapy for *Arsha* such as – Palliative medicinal treatment, local application of Alkaline paste, Thermal cauterization and Surgery. Similarly, *Acharya Vagbhata & Charaka* has advocated use of *Jalauka* (leeches) for eliminating the vitiated blood in management of protruded large pile masses.

Methodology: In this case report, a 63-year-old male patient came with complaints of severe pain and discomfort at anal region due to inflamed pile mass at anal region (not reducible), constipation and occasional per rectal bleeding since 7 days. The condition was diagnosed as Acute prolapsed external Haemorrhoids and was treated with specific regimen -3 sittings of *Jalaukavacharana* (leech therapy) locally along with *Triphala guggulu* (500mg), *Arogyavardhini Vati* (400mg) two tablets twice a day and Gandharva *Haritaki* (3gm) at night with lukewarm water for 28 days. Therapeutic evaluation and assessment of treatment was done based on prognosis in pain, size of pile mass, discoloration, bleeding per rectum and constipation.

Result: It was observed that pain was relieved immediately after Leech therapy. However, swelling of prolapsed mass, per rectal bleeding and constipation reduced gradually. Also, color of prolapsed pile mass turned to normal texture at completion of treatment.

Conclusion: In this case study, Acute prolapsed external Haemorrhoids (Grade IV) was conservatively managed by three sitting of *Jalaukavacharana* (leech therapy) locally along with adjuvant *Ayurvedic* medicines which clearly revealed significant improvement in the symptoms of Acute prolapsed Haemorrhoids.

Keywords: Haemorrhoids, *Arsha*, *Jalaukavacharana*, Leech therapy

Introduction:

Haemorrhoids or Piles are masses or clumps of tissues which consist of muscle and elastic fibers with enlarged, bulging blood vessels and surrounding supporting tissues present in the anal canal of an individual. It is a condition characterized by the prolapsed of an anal cushion that may result in bleeding and pain. [1] It is classified into Internal (defect in internal hemorrhoidal plexus, located above the dentate line) and External Haemorrhoids (defect in external hemorrhoidal plexus, located below the dentate line). The available data reveals that prevalence rate of this disease is 4.4% in 10 million people. [2] The conventional medical treatment includes diet-lifestyle modification, sclerotherapy, banding, LASER ablation etc. in early stage and various surgical procedures such as Haemorrhoidectomy, MIPH etc. in advanced stage with varied prognosis. Further, Prolapsed Haemorrhoids is an emergency condition which requires immediate surgical intervention and the condition becomes worse after thrombosis and strangulation of the pile mass with severe pain and discomfort. The venous return of such strangulated pile mass become very low and severe oedema occurs along with painful condition [3]. Hemorrhoids can be co-related with *Arsha* or *Gudarsh* mentioned in Ayurvedic texts. Further, *Arsha* is included in *Ashta-mahagada* category (amongst 8 diseases which are difficult to treat). [4] *Arsha* is defined as a disease which produces extreme discomfort to the patient resembling one's enemy, leading to painful defecation and pile mass formation. According to *Acharaya Sushruta* it is a *rakta* and *mamsa doshaja vyadhi* (disorder related to blood and muscle). [5] The Ayurvedic texts explains pathogenesis of *Arsha* as vitiated *Vata*, along with blood and muscle tissue (*Rakta, Mamas dhatu*) and local blood vessels (*pradhan dhamani*), disturb sphincters and surrounding tissues in the anal canal, leading to pile mass formation i.e. hemorrhoids (*Gud Arsha*). Further, fourfold treatment for *Arsha* is mentioned such as *Bheshaj* (Medicinal treatment), *Kshar*

karma (Herbal caustic paste), *Agnikarma* (thermal heat burn) and *Shashtra karma* (Surgery). [6] *Acharya Vagbhata* & Charak has mentioned use of *Jalauka* (leeches) for eliminating the vitiated blood in management of protruded large pile masses. [7,8] Similarly, *Acharya Sushruta* has also advocated *Jalukavacharana* (leech therapy) as one of the lines of treatment in all inflammatory conditions. [9,10,11] It has been proven that Leech's saliva has numerous bioactive constituent which possesses anti-inflammatory, analgesic, thrombolytic, anti-coagulant and blood circulation enhancing properties. [12] Hence, in present case study, an Acute prolapsed external Haemorrhoids was conservatively managed successfully with 3 sittings of *Jalaukavacharana* (leech therapy) -locally along with *Triphala guggulu*(500mg), *Arogyavardhini Vati* (400mg) two tablets twice a day and *Gandharva Haritaki* (3gm) at night with lukewarm water for 28 days.

Patient's Information:

In this case study, a 63-year-old male patient with chief complaints of severe pain and discomfort at anal region, mass at anal region (not reduceable), occasional per rectal bleeding, constipation, difficulty in sitting due to inflamed pile mass since 7 days, visited *Shalyatantra* (~Surgery) OPD for Ayurvedic treatment. Patient has no history of similar episode in past, no history of drug allergy, any previous surgery and no relevant disease family history was noticed. Patient was K/C/O hypertension and on regular treatment since 2005. The personal history of patient revealed non-vegetarian diet, normal appetite, good frequency of intake, normal sleep pattern, addiction of Tobacco and Alcohol since 30-40 years. The patient was vitally stable having pulse-78/min, Temperature-98-degree Fahrenheit, blood pressure-120/70mmHg, respiratory rate was found 20/min. General examinations of the patient were found normal.

Local examination:

- Inspection- Bluish prolapsed thrombosed circumferential Haemorrhoidal mass with active per rectal bleeding seen (size -3”x3”cm inflamed x bleeding)
- Palpation- Severe tenderness was noted. Due to severe sphincter spasm, tenderness at anal region and active bleeding, proctoscopy was not done.
- The final clinical diagnosis - **Acute prolapsed external Haemorrhoids.**

Laboratory examination:

CBC	Hb – 9.9gm/dl, TLC – 9,200/cumm, RBC count -5.31millions/cumm, Platelet Count – 3.22Lakh/cumm, ESR-50mm/hr.
Blood Sugar	Fasting - 98 mg/dl PP -110.0 mg/dl
Bleeding And Clotting Time	BT-1min 40 seconds CT-4 min 50 seconds
RFT	Serum Uric acid-6.7mg/dl, Serum creatinine-1.2mg/dl BUN-8.8mg/dl
LFT	Serum Bilirubin-0.4mg/dl, ALP - 66.6mg/dl, AST-24.7 mg/dl
Urine Routine And Microscopic	NAD
Triple H Antigen	HBsAg – Non reactive, HIV (Antibodies) – Non reactive, HCV - Non-reactive

Table 1: Blood investigations on visit day

Material And Method:

This is a single case study. A 63-year-old male patient (OPD/2024/364451) diagnosed as Acute prolapsed external Haemorrhoids was treated with *Jalaukavacharana* (Leech therapy) locally along with internal administration of Ayurveda drugs conservatively. Proper counselling, written informed consent was taken after explanation of proposed line of treatment. For the therapeutic evaluation, Parameters such as pain, size of prolapsed mass (swelling), per rectal bleeding, discoloration of prolapsed pile mass and constipation were assessed before, during and after

completion of treatment. Assessment of pain was done by using ‘Visual Analogue Scale ’whereas evaluation of other parameters assessed using 0-3 gradation score. Similarly, constipation was assessed by ‘Victoria Bowel Performance Scale’

Drug Profile:

1. *Jalaukavacharana* (~Leech therapy): Three consecutive sittings of leech therapy done (at the interval of seven days) locally at protruded pile mass.
2. Internal medicines- *Triphala Guggulu*(500mg), *Arogyavardhini vati* (400mg) twice a day with Luke warm water and *Gandharva Haritaki* (3gm) at night for 28 days.

Adjuvant to above regimen-
Tab. Orofer-XT 1 OD for 1 month after observing low hemoglobin level (9.9 gm/dl). Similarly, light easy digest salutary diet and sitz bath with Luke warm water was advocated.

Leech therapy application procedure was divided in three steps:

Purva karma (pre-operative procedure)-

The Leeches were purified and activated by putting it in bowl containing *Haridra* powder (*Curcuma longa*) and water. Thereafter, leeches were transferred to another bowl of clean water. Similarly, part preparation i.e. cleansing and draping (perianal) of the patient was done.

Pradhan karma (main procedure)-

Patient was placed in right lateral position and the anal verge was cleaned with tap water. Subsequently, 3 leeches were applied at perianal region (over prolapsed external Haemorrhoids at 3, 11 and 7’O clock positions) for 20 minutes. Leeches were covered by wet cotton gauze to moist its skin. After 20 minutes of blood sucking, the leeches fallen off from the site spontaneously.

Paschat karma (post-operative procedure):

After *Pradhan karma* the site was cleaned and *Haridra* powder was applied on bleeding site followed by applying of tight dressing with sterile

gauze and adhesive sticking tape. The bandage was removed coming morning before act of defecation. Further, induction of emesis to the Leech was done by dusting *Haridra* powder on its mouth, followed by putting it into *Haridra jala*, then in pure water. The used leeches were kept in a separate jar labelled with details of the patient. The same procedure was repeated after a week.

Assessment parameters and gradations:

To evaluate the effect of therapeutic intervention, parameters such as Pain, size of prolapsed pile mass, per rectal bleeding, discoloration of skin and Constipation were assessed before and after treatment. Pain was assessed by Visual Analogue Scale whereas other symptoms were taken into consideration under grading system according to their severity No symptom = 0, Mild = 1, Moderate =2, Severe =3. Similarly, constipation was assessed by ‘Victoria Bowel Performance Scale’ tabulated as below in table (2).

	Category	Grade
Pain	Severe pain	7-8
	Moderate pain	4-7
	Mild pain	1-3
	No pain	0
Gradation for size of prolapsed mass (On the basis of day-1 size)	Less than 1cm (25%)	0
	Between 1.5cm to 2cm (50%)	1
	Between 2cm to 2.5cm (75%)	2
	About 3cm (100%)	3
Per rectal bleeding	No bleeding	0
	Mild bleeding	1
	Moderate bleeding	2
	Severe bleeding	3
Gradation for discoloration of skin	Skin color (Normal color)	0
	Pinkish color	1
	Reddish color	2
	Bluish color	3
Constipation	Minimal or no effort to defecate	0
	Mild effort or straining required to defecate	1
	Moderate effort or straining required to defecate	2
	Unable to defecate despite maximum effort or straining	3

Observations:

After, the first sitting of *Jalaukavacharana* (~Leech therapy) locally along with adjuvant *Ayurvedic* medicines, pain and per rectal bleeding reduced from severe to mild, about 25% reduction in size of prolapsed mass was noted i.e. from 3”x3”cm to 2.5”x2.5”cm, changes in color of prolapsed pile mass from bluish to reddish color was observed and constipation relieved moderately from grade 3 to grade 2. The patient came for follow up after first sitting of leech application on day 3 and during assessment it was found significant improvement in symptoms and the treatment regimen continued.

After, second sitting of leech therapy locally mild pain and per rectal bleeding was observed. Further, about 50% reduction in size of prolapsed pile mass was noted i.e. from 3”x3”cm to 1.5”x1.5”cm, the color of pile mass changed from reddish to pinkish, and constipation was completely relieved.

After, third sitting of *Jalaukavacharana* (~Leech therapy) locally, there was no pain, no per rectal bleeding, about 75% reduction size of prolapsed mass i.e. from 3”x3”cm to 0.5”x0.5”cm, prolapsed pile mass color changed from pinkish to skin colour and no constipation.

The patient got significant relief in all symptoms after third sitting of Leech therapy (locally). Hence, thereafter only palliative medicine was prescribed for smooth act of defecation for 15 days



(Image 1: Day 1 Clinical presentation of Acute prolapsed Ext. Haemorrhoids)



(Image 2: First sitting of Leech therapy)

Table 2 :Gradations of different parameters



(Image 3: Second sitting of Leech therapy)

(Image 4 : Third sitting of Leech therapy)

	Before treatment (11/4/20 24)	1 st sitting (12/4/20 24)	2 nd sitting (19/4/20 24)	3 rd sitting (20/4/20 24)	Follow up (23/4/20 24)
No of leeches applied	Not applicable	3	2	2	No leech applied
Pain	Severe (3)	Mild (1)	Mild (1)	No pain(0)	No Pain (0)
Swelling Size of prolapsed mass	3"x3"cm (100% swelling size)	2.5"x2.5"cm (25% reduction in swelling size)	1.5"x1.5"cm (50% reduction in swelling size)	0.5"x0.5"cm (more than 75% reduction in swelling size)	Markedly reduced prolapsed mass
Per-rectal bleeding	Moderate (2)	Mild (1)	Mild (1)	No P/R bleeding (0)	No P/R bleeding (0)
Discoloration of prolapsed pile mass	Bluish color (3)	Reddish color (2)	Pinkish color (1)	Skin color (0)	Skin color (0)
Constipation	Unable to defecate despite maximum effort or straining (3)	Moderate effort or straining required to defecate (2)	Mild effort or straining required to defecate (1)	Minimal or no effort to defecate (0)	Minimal or no effort to defecate (0)

Table 3: Therapeutic efficacy of treatment



(Clinical presentation Before treatment)

(Clinical presentation After treatment)

Results:

After, the first sitting of *Jalaukavacharana* (~Leech therapy) pain and per rectal bleeding reduced significantly to mild, about 25% reduction in size of prolapsed mass was noted, color of prolapsed mass changed to reddish color and constipation was moderately relieved. After, second sitting of leech therapy mild pain and per rectal bleeding was observed, 50% reduction in size of prolapsed pile mass was noted, color of pile mass changed to pinkish, and constipation was completely relieved. After, third sitting of *Jalaukavacharana* (~Leech therapy) there was no pain, no per rectal bleeding, about 75% reduction size of prolapsed mass was noted, pile mass color turned to skin colour and there was no constipation. The patient got significant relief in all symptoms after third sitting of Leech therapy (locally). Thereafter only palliative medicine was prescribed for smooth act of defecation for 15 days. Moreover, there was asymptomatic, shrunken external pile mass (0.5"x0.5"cm) remained which may require surgical excision after proper evaluation.

Discussion:

The Acute prolapsed haemorrhoid is an emergency condition, the condition becomes worse after thrombosis and strangulation of the pile mass with severe pain and discomfort. It require immediate surgical intervention. *Acharya Sushruta* has mentioned *Jalukavacharana* (leech therapy) as instant and effective treatment in all inflammatory conditions. Similarly, *Acharya Vagbhata & Charaka* has advocated use of *Jalauka* (leeches) for eliminating the vitiated blood in management of protruded large pile masses.

Hence, in this single case study a patient with acute prolapsed external haemorrhoids was treated with Leech Therapy (locally) with adjuvant *Ayurvedic* medicines such as - *Triphala guggulu*, *Arogyavardhini Vati* and *Gandharva Haritaki* in the prescribed dose provided significant relief in the symptoms of prolapsed Haemorrhoids.

Probable mode of action of action of Leech- The major constituents Leech saliva- *Hirudin* inhibits blood coagulation by binding to thrombin, *Calin* inhibits collagen mediated platelet aggregation, *Destabilase* dissolves fibrin, *Bdelin* acts as anti-inflammatory and inhibits trypsin, *Eglin* acts as anti-inflammatory and inhibit activity of cathepsin G, *Carboxypeptidase A* inhibitors increases the inflow of blood at the bite site, Histamine like substance, acetylcholine acts as vasodilator and Anaesthetic substance which causes anaesthesia at the bite site. Thus, the Leech saliva increase the microcirculation, decrease the inflammation as well as pain and swelling^[13,14]

Triphala Guggulu has wound healing, anti-inflammatory and antimicrobial activities. Hence, pain, tenderness and discomfort were reduced due to the anti-inflammatory and anti-infective properties of *Triphala Guggulu*.^[15,16]

Arogyavardhini Vati having the properties like- *Pachani* (digestive), *Deepani* (appetizer), *Pathya* (wholesome for channel), increase *Kshudha* (appetite) and *Sarvaroga prashamani* (can alleviate all types of disorders from body).^[17] It has proven hepatoprotective action as well.

Gandharv Haritaki- Gandharva Haritaki is polyherbal Ayurvedic medicine. The Contains of this medicine are *Erand Tail*, *Balharitaki*, *Sunthi*, *Sandhav* and *Savarchal Lavana*. It has purgative and laxative action. *Gandharva Haritaki* helps in smooth evacuation and removes toxins from body.^[18]

Conclusion:

The observation showed that, this specific treatment which was combination of Leech Therapy (locally) with adjuvant medicines provided significant relief in the symptoms such as pain, tenderness, size of prolapsed Haemorrhoids and per rectal bleeding. Similarly, the discoloration (bluish) of prolapsed Haemorrhoids turned to normal skin colour gradually. *Hirudin* and *Hyaluronidase* present in saliva improves microcirculation and absorption of extracellular fluids. Thus, Leech application proved effective in reducing pain and swelling of prolapsed pile mass.

Hence, it can be concluded that Leech Therapy (locally) proved an effective alternative treatment in the management of Acute prolapsed external Haemorrhoids and immediate surgical intervention can be avoided. Moreover, a large number of cases need to be treated and evaluated with this specific regimen to establish this alternative treatment modality in the management of acute prolapsed external Haemorrhoids.

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