



Clinical Efficacy of Medicinal Leech Therapy (Jalaukavacharan) in Treating Fourth-Degree Haemorrhoids: A Case Report

Megha Vinayak Jadhav, Hari Shankar, Hemant Toshikhane

Department of Shalyatantra, Parul Institute of Ayurveda, Parul University, Vadodara, Gujarat - 391760
E-mail: 13meghavj@gmail.com

ABSTRACT

In the present day, Ano-Rectal disorders are progressively developing in the population. Among all the Ano-Rectal disorders, Arsha seems to be an entity, which has got so many problems, among them fourth-degree haemorrhoids seem to be the most troublesome and are in need of an emergency line of therapy. Similarly for the treatment of Piles, there are several techniques, from injectable therapy, haemorrhoidectomy, to the latest cryosurgery and laser therapy are available. One of them, Medicinal Leech therapy also known as Jalaukavacharan, is a novel contribution of Ayurveda to the contemporary world. Leech therapy might be a safe and better alternative to control disorders. Medicinal Leech therapy is used in a number of inflammatory disorders. Its mode of action depends on the injection of Leech saliva into patient's tissues during the process of blood sucking. Numerous bioactive components found in leech saliva have effects that are anti-inflammatory, analgesic, thrombolytic, antioxidant, vasodilator, anti-coagulant, and improve blood circulation. In this study, a 36-years-old patient came with the complains of bleeding per ano and protrusion of mass per-ano having pile mass at 3, 5, 7, 11 o' clock position. Despite of being fit for surgery, patient was not willing for surgery because he was Bhiru (fearful) and sukumara (sensitive), we chose to do Jalaukavacharana in this patient. The effectiveness of Medicinal Leech therapy (MLT) as a novel and curative mode of treatment for easing the signs and symptoms of fourth-degree haemorrhoids was assisted in this study.

Keywords- Jalaukavacharan, Forth Degree Haemorrhoids, Arsha, Medicinal Leech Therapy, Blood Letting.

Received 16.09.2023

Revised 21.10.2023

Accepted 29.11.2023

INTRODUCTION

One of the most prevalent anorectal disorders seen in everyday practice in India is haemorrhoidal illness. Haemorrhoids are expected to affect 50% of the population at some point in their lives [1]. With respect to the anal canal, haemorrhoids are a dilated plexus of the superior haemorrhoidal veins. They stand for anal cushion expansion which is abnormal [2]. Clinically identified by rectal bleeding, mucus discharge, perianal itch or soreness, prolapse of the haemorrhoidal cushions or projecting mass, soiling, and issues with hygiene. Due to the patient's underreporting, it is difficult to determine the precise prevalence of symptomatic haemorrhoids [3]. Haemorrhoid disease affects people's quality of life greatly despite its high prevalence and low morbidity [4]. The specific aetiology of symptomatic haemorrhoid disease is poorly understood. However, a number of potential contributing factors, such as a lack of dietary fibres, constant straining, spending too much time on the toilet, constipation, diarrhoea, pregnancy, leading a sedentary lifestyle, and family history, have been linked to the migration of the hemorrhoidal cushions. Haemorrhoids are characterized by bleeding, mucous discharge, itching, pain, and prolapse. This condition is known as Arsha in Ayurveda. Acharya Charak described that desecrated dosha follow Bahya and Aabhyantra rog marga and produce Arsha. while Acharya Sushrut has itemized it under Raktaja and Mamsadosaja disease. Acharya Sushrut gives the pathogenesis of arsha in details. At first desecrate of dosha in a single, combination of two or three dosha along with Rakta dosha, they travel downwards through pradhan dhamani to reach guda and affect guda valies and produce Arsha. Rakta dosha is one of the prime factor in pathology of Arsha. According to Acharya Sushrut, rakta must be cared at all costs because it is the foundation of all dhatus and is in charge of dharana for all dhatus. For the total healing of the disorders known as Raktavisravan or Raktamokshan (Bloodletting), removal of vitiated Rakta is crucial.

“Aadhyaabaalasthvirabhirudurbalanaarisukumaaraanaamanugrahaarthan
paramasukumaaroyan shonitavasechanopaayobhihito jalaukasah ||3|| “
(Sushrut Samhita, Sutra sthana – 13/3)

Raktamokshan includes the Jalaukavacharan technique which shows excellent effects on such disorders in patients who are children, females, durbala, bhuru, sukumar etc. Since a long time ago, Raktamokshana has

been used in India to treat a variety of ailments, including Arsha (haemorrhoids), Dusta vrana (infected wounds), Granthi (cystic lesions), Arbuda (Neo Plasm), etc. One sort of Raktamokshana that combats vitiated Rakta and Pitta is called Jalaukaavacharana. Leeches pierce the skin and then inject a variety of biological substances into the bloodstream after sucking in blood. Contrary to what is often believed to be the case, leeches typically only take 5 ml of blood; nevertheless, their effectiveness is increased if more leeches are put in the affected area. The suction action of the leech therapy removes 5 to 15 ml of blood. Medical Leech Therapy operates in this manner. Along with saliva, other physiologically active chemicals are injected into the host's tissues and blood. The blood leaks because of the hirudin in the leech's saliva that was injected into the wound site, and it does so for several hours after the leech has been removed [7]. Along with the saliva, other physiologically active substances are injected into the bloodstream and host tissue. Inhibitors of coagulation, platelet aggregation, vasodilators, anesthetics, antimicrobials, and anti-inflammatory medicines are just a few of the more than 100 bioactive substances that are used in medicine. An anesthetic gel found in leech saliva reduces discomfort. Hirudin acts as an anticoagulant and has thrombolytic effects on the pile mass, hence diminishing its size. Saliva from leeches contains an anti-inflammatory substance called bdellin. Hirudin encourages more liquefaction of blood that has collected because hyaluronidase operates at a deeper level. As a result, the size of the edema significantly decreased, which reduces inflammation and maintains normal circulation. Additionally, the anti-thrombotic and anti-inflammatory properties of Hirudinaria granulosa are utilized to treat hemorrhoids and chronic venous illness [5]. The current study sought to determine if Medical Leech Therapy (MLT) or Jalaukavacharan was effective in treating third- and fourth-degree hemorrhoids.

CASE REPORT

In this study, a 36-years-old male patient with complains of bleeding per ano and protrusion of mass per-ano had pile mass at 3, 5, 7, and 11 o'clock positions. Patient was not willing for surgery because he was Bhiru (fearful) and sukumara (sensitive), we chose Jalaukavacharana for this patient. Significant relief was seen in symptoms with two sittings of bloodletting. The patient was relieved from all symptoms within two weeks. No complications were reported after the procedure.

Selection of Jalauka (Leech)

Out of twelve, only six varieties of non-poisonous Leeches are used for medicinal purposes. Sankumukhi type of Leech is preferably used for medicinal purposes due to its rapid blood-sucking capacity.

Length of Jalauka

For human beings, 4 -6 Anguli Pramana Jalauka is preferred which is up-to 20 cm.

Time of Collection

Acharya Dalhana has told that the best time for collecting leeches is Sharad Ritu(Autumn).

Storage and Maintenance

- The Leech will survive quite happily in a cool place. Does not exceed 15 -20 Leeches in one container.
- should be stored in a well-labeled container having multiple pores on the top for proper aeration.
- Avoid direct exposure to sunlight to the leeches. The water in the container should be chlorinated and should be replaced after 5 to 6 days.
- If it is not possible to get the chlorinated water then keep the container of water in the open air for a period of time and then use it for storage of Leeches.
- Acharya Vagbhata mentioned that the pot should be changed every five days.

Method of Jalauka Application:

1) Purva Karma (Pre-Procedure Protocols)

- Proper snehana (oleation) and swedana (sudation) of the patient.
- Purification of Leech by pouring the Leech in water mixed with turmeric powder.
- Part preparation – Cleaning of part of the body to which leech is going to be applied.

2) Pradhana Karma (Main Procedure Protocols)

- Before application prick, the skin with a sharp and sterile needle so that drop of blood comes out then applied the Leech through its front end and cover the leech with wet cotton.
- If the leech is not ready to suck the blood from the body part then application of Madhu, Ghrit, or Butter should be done

➤ Observation of Leech during blood sucking

While sucking the blood following signs appears in the body of leech

- Gradual distension in the central portion of the body.
- Itching and burning sensation at the site of bite.
- Pulsations on the body of leech may be visible.

Removal of Leech

After 30-70 minutes the leech is removed by itself, or by application of turmeric powder on the mouth of the leech.

3) Paschata Karma (Post Procedure Protocols)

➤ Care of wound

After detachment of the leech, there is a triangular wound created by the mouth of the leech. The blood comes out from the wound. The bleeding from the wound is checked by the application of tight bandaging with the use of Yastimadhu or Turmeric powder.

➤ Emesis of Sucked blood

The Leech that is used to induce emesis goes through a process called Vamana so that it can be used on the same patient again the next time. Turmeric powder is placed to the mouth of the leech for the Vamana. In order to become pure, the leech vomits up all the blood it has sucked. For appropriate emesis, pushing the Leech from the caudal to the front end may be necessary. Leech should be placed in fresh water after performing the necessary Vamana, where it swims quickly before settling down. Put the Leech back in a fresh container or tank.

RESULTS AND DISSCUSSION

Probable Mode of Action of *Jalaukavacharan* (Leech Therapy):

“ sheetalaadhivaas madhura jalauka hereeshambhava |
tasmaat pittopasrshte tu hita sa tvavasechane ||6|| “
(Sushrut Samhita, Sutra sthana – 13/3)

Rakta dhatu is the primary carrier of vitiated pitta in the entire body, and since vitiated pitta dhatu may be the loads of metabolic waste that are carried along with this circulatory fluid, the probable mode of action of Jalauka Avcharana suggests that it was due to its ability to remove Rakta dhatu along with vitiated doshas. When this rakta dhatu leaves the body, it expels the vitiated pitta along with it, cleaning the body through removal and further reducing its quantity by the production of healthy Rakta Dhatu that is necessary to make up for the blood loss. The right administration of Raktamokshan also causes Prasad manas and stops the growth of Raktaj Rogas like Twaka dosha, Granthi, and Shopha, among others [5].

The amount of blood that is typically expelled for 10 to 48 hours after leech therapy, or 50 to 150 ml, and the amount of blood that is suctioned out during medical leech therapy, which ranges from 5 to 15 ml. Leech saliva was applied to the wound during leech therapy sessions, causing blood to leak from the wound. The quantity of leech saliva injected into the host was the second factor that contributed to the healing effects of leech therapy. The presence of salivary cells with cell bodies in the pharyngeal region in leeches, which secrete independently through excretory ducts with openings on the tooth surface despite the absence of a real salivary gland, is an unusual observation.

The fact that leech saliva contains a variety of bioactive peptides makes it useful as a therapeutic agent for treating a wide range of medical disorders [6].

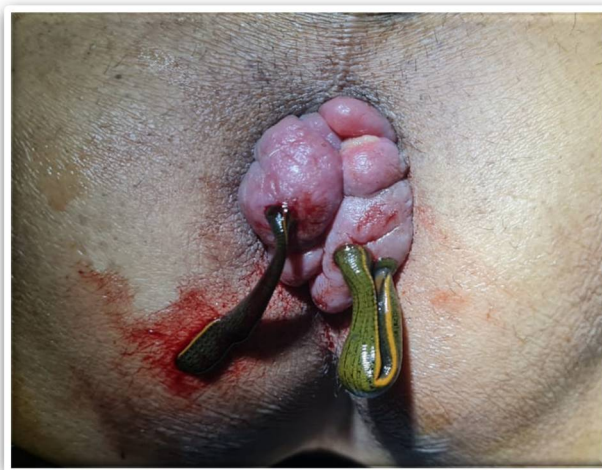


Fig.No.1 showing *Jalaukavacharan* in fourth degree haemorrhoids



Fig 2

Fig 3

Fig.No.2 showing fourth degree before treatment

Fig.no.3 showing haemorrhoids haemorrhoids after Jalaukavacharan

CONCLUSION

The current study demonstrates that Medical Leech Therapy (MLT) or Jalaukavacharan enhances the quality of life of patients by reducing the signs and symptoms of third and fourth-degree haemorrhoids. For patients who are fit for surgery but who are not willing for surgery, Bhuru (fearful) and Sukumara (Sensitive), we can perform Jalaukavacharan in them. We observe that Medical Leech Therapy has the potential to be an extra or alternative therapy to the non-surgical management of third and fourth-degree haemorrhoids in view of our case study. By conducting randomized controlled studies with a larger sample size, the clinical effectiveness of Medical Leech Therapy or Jalaukavacharan, for the treatment of haemorrhoids should be further assessed.

REFERENCE

1. Agarwal N, Singh K, Sheikh P, Mittal K, Mathai V, Kumar A. (2016). Executive Summary - The Association of Colon & Rectal Surgeons of India (ACRSI) Practice Guidelines for the Management of Haemorrhoids- Indian J Surg ;79(01):58-61. Doi: 10.1007/s12262-016-1578-7» <https://doi.org/10.1007/s12262-016-1578-7>
2. Standring S. Gray's Anatomy The Anatomical Basis of Clinical Practice. 39th ed. Edinburgh: Elsevier Ltd; 2005:1205-1210
3. Simillis C, Thoukididou SN, Slessor AA, Rasheed S, Tan E, Tekkis PP. (2015). Systematic review and network meta-analysis comparing clinical outcomes and effectiveness of surgical treatments for haemorrhoids. Br J Surg;102(13):1603-1618. Doi: 10.1002/bjs.9913» <https://doi.org/10.1002/bjs.9913>
4. Sun Z, Migaly J. (2016). Review of hemorrhoid disease: presentation and management. Clin Colon Rectal Surg ;29(01):22-29 <http://dx.doi.org/10.1055/s-0035-1568144>» <http://dx.doi.org/10.1055/s-0035-1568144>
5. Singh SK, Rajoria K. (2020). Medical leech therapy in Ayurveda and biomedicine - A review. J Ayurveda Integr Med ;11(04): 554-564 Asutkar S, Varshney S. (2019). An Interdisciplinary Critical Review of Leech Therapy; Evolution, Indications, Salivary Gland Secretions and Mode of Action- The Scientific Way. J Pharm(IOSRPHR); 9(04):10-18
6. Vaidya Yadavji trikamji Acharya (Ed.) Shri Dalhanacharya Nibandhsamgraha commentarator of Sushruta Samhita, Sutra Sthan Shonitvarniyama Adhyaya chapter 14 verse 33-34, Chaukhambha Sanskrit Sansthan, Varanasi, 2009, 55.
7. , SK Singh et al. (2019). Medicinal leech therapy in Ayurveda and Biomedicine A Review J Ayurveda Integr Med. S0975-9476(18)30493-5. DOI: 10.1016/j.jaim.2018.09.003

CITATION OF THIS ARTICLE

Megha Vinayak Jadhav, Hari Shankar, Hemant Toshikhane. Clinical Efficacy of Medicinal Leech Therapy (Jalaukavacharan) In Treating Fourth-Degree Haemorrhoids: A Case Report. Bull. Env.Pharmacol. Life Sci., Vol 12 [12] November 2023: 428-431