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Case Study

Effect Of Leech Application In Prolapsed Thrombosed Haemorrhoid - A Case Study

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ABSTRACT

Prolapsed haemorrhoid is an emergency condition. The condition becomes worse after thrombosis due to strangulation of the pile mass. Urgent surgical intervention is required. Patient stuck in serious condition and seeks urgent surgical attention. Arsha or haemorrhoids included under the category of Mahagadas as it significantly disturbs the normal proceedings or activities of the body like an enemy. Venous return of strangulated pile mass become very low and severe edema takes place along with serious painful condition. Leech application is known to be effective in thrombosed haemorrhoids as it relieves the venous pooling of blood in that area by dissolving the clotted blood. In present case study, a patient of grade IV thrombosed Haemorrhoid was treated by leech application. Leech application was found safe and effective in the management of grade IV thrombosed haemorrhoids.

INTRODUCTION

Ayurveda the Indian system of medicine comprises of eight different specialties in which shalyatantra the surgical school of thought has got prime importance.¹ Acharya Sushrut father of Surgery has considered Arsha (Haemorrhoids) in Ashtamahagada (8 major diseases)¹. Sushrut has described arsha as Rakta-Mansa Pradoshyadhi. Charak believes that vitiated dosh follows bahyaja

and abhyantar rogamarg to produce arsha³. Complication of arsha include trishna (thirst), aruti (anorexia), shoola (severe pain), shonit prasuti (excessive bleeding), shotha (oedema), atisara (diarrhea) as per the Sushruta.⁴ In this situation surgery is not a good alternative solution available. However, Sushruta has contraindicated bloodletting in Arsha, but in certain indicated

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situation of haemorrhoids, it is advisable. 5 Charak has mentioned Jalauka Karma in Raktaja (bleeding pile mass). Vagbhat has also advised bloodletting in sanchit dushta rudhira (thrombosed), shoth, (swelling) and kathin (hard), arsha (pile mass) 7. The present study is a case report of a grade IV thrombosed haemorrhoid patient which was treated successfully with leech application.

Aim :

The aim of this case report is to see the result of leech application in a case of grade IV thrombosed Haemorrhoids.

Case Report :

A male patient XYZ of age 37 years, resident of Nanded with OPD registration No.86197 came in OPD No.6 of Shalyatantra department in Government Ayurved Hospital and College, Nanded 431601 at 10.30 am on dated 11 November 2022 in a very panic and emergency like situation. His face was in agony and he was seeking medical attention in urgent need. He had the following complaints since 2 days.

- Severe pain and burning sensation at anal region.
- Big mass felt at anal region.
- Difficulty in passing stool.
- P/R bleeding.

He had not taken any medical advice and he directly came here for treatment.

Past History :

He had past history of Chicken Guniya 15 years before taken treatment from private general practitioner. He had no history of DM, HTN, CHD, CVA, BA or any other major medical illness. He had no history of surgical interventions before.

Examination:

Patient was examined in Lithotomy position, after proper examination it was found that there was a large prolapsed mass at 3, 7 & 11'o clock position. It was tried to reduce the prolapsed mass with local

application of lox 2% jelly but it could not be possible due to severe pain.

It was diagnosed as grade IV Thrombosed Haemorrhoid so patient was admitted in male surgical ward No.51, Bed No.16, IPD registration No.3254 on dated 11 November 2022.

Systemic Examination:

Patient was conscious well oriented with time, place and person with good general condition and his vitals were recorded as BP-120/80 mmHg, P-72/min and temperature was 98.0F.

Date	11/11/2022, 10.50 am in lab No.23 and 5 of GAC Nanded. Hb-14gm/dL
TLC	9.60/cumm(n-68%, L-25.1%, M-4.4%, E-16%, B-0.6%)
MCV	81.0 FL
MCHC	35.9 gm/dL
S.creat	0.31mg/dL
MCH	29.1 pg
TP	5.82 mg/dL
PLT	23.4 Lac/cumm
LFT	
BT	2 min 8 sec
T.Bil	0.58 mg/dL
Alb	3 min 47 sec
BSL(R)	94 mg/dL
HbsAg	Non-reactive
VDRL	Non-reactive
HIV	i. Non-reactive ii. Non-reactive

Methodology :

After necessary investigation, leech therapy was planned. Patient was in very painful condition on day of admission, so conservative management was given for 1st day. With T.Zerodol SP BD.

Gandharv Haritaki churna 3gm at bedtime with lukewarm water. Hot Sitz bath with warm water. Then leech therapy was planned. After taking informed written consent of patient, he was kept in left lateral position leech was applied at thrombosed haemorrhoidal mass at 3 & 5'o clock on 11/11/2022. Consecutive second sitting of leech application were done on 15/11/2022.

Criteria of Assessment and Observations :

Pain and Tenderness according to VAS scale

0	No Pain
1-3	Mild Pain
4-6	Moderate to severe pain
7-9	Severe Pain
10	Worst Pain

Variables	Pain	Treatment
Before treatment	8	9
During 1 st sitting	5	5
During 2 nd sitting	2	3
After treatment	0	0

2. Bleeding P/R

Mild Bleeding - 1-5ml

Moderate Bleeding - 6-10 ml

Severe Bleeding - > 10ml

Before Treatment	Severe
After 1 st Sitting	Moderate
After 2 nd Sitting	Mild
After treatment	No Bleeding

3. Mass Prolapsed

Before Treatment	Completely Prolapsed
After 1st Sitting	Reduced but required T-bandage
After 2nd Sitting	Completely reduced
After treatment	Completely reduced



Before Treatment



First Sitting



Second Sitting



After Treatment

RESULT :

As soon as the leech application was started, patient relieved of pain . After 2nd sitting size of prolapsed haemorrhoid was also reduced. Prolapsed haemorrhoid was also able to reduce in anal canal after the proper lubrication with lox 2% gelly. He was completely relieved, So he was discharged on 18/11/22 after giving proper diet instructions.

Follow up :

Patient was called for follow up after 7 days in OPD. On examination it was observed that Haemorrhoidal mass was shrunk in size. No history of bleeding and pain noted and no tenderness observed during P/R examination.

DISCUSSION AND CONCLUSION :

Today, scientific studies concerning the active substances in leeches have given us a better understanding of how they work and have given credit to their use. In traditional medicine, a lot of the old applications were still used. Due to its qualities of anticoagulant, vasodilator, thrombolytic, anti-inflammatory and anaesthetising, leeches have been used in a medical treatment.⁸ Through there sucking effect, leeches stimulate circulation of cells at risk of necrosis and maintain oxygenation of the tissue.⁹ They therefore promote restoration of capillary

anastomosis. They accelerates the hematoma decongestion process.⁹ In the present study the success story of leech therapy was pragmatic in this condition of haemorrhoid. Leeches can be used to restore blood circulation in blocked veins by removing pooled blood.

ACTION OF LEECHES -

It eliminates microcirculation disorders, restores damaged vascular permeability of tissues & organs, eliminates hypoxia (oxygen starvation), Reduces blood pressure, increases immune system activity. Action of various alkaloids in Leeches is as follows-

1. Hirudin - Inhibits blood coagulation by binding to thrombin.
2. Calin - Inhibits blood coagulation by blocking binding of von Willebrand factor.
3. Collagen factor -Inhibits collagen-mediated platelet aggregation.
4. Destabilase - Monomerizing activity. Dissolves fibrin. Thrombolytic.
5. Hirustasin -Inhibits kallikrein, trypsin, chymotrypsin. neutrophilic, cathepsin G.
6. Bdelins- Anti-inflammatory. Inhibits trypsin, plasmin, acrosin.
7. Hyaluronidase -Increases interstitial viscosity Antibiotic.
8. Tryptase inhibitor - inhibits proteolytic enzymes of host mast cells.
9. Factor Xa inhibitor - Inhibits the activity of coagulation factor xa.
10. Carboxypeptidase A inhibitors - Increases inflow of blood at the bite site.
11. Histamine like substances - Vasodilator. Increases the inflow of blood at the bite site.
12. Acetylcholine - Vasodilator.
13. Chloromycetyln - Antibiotic.
14. Eglins- Antiinflammatory, Inhibit activity of alpha- chymotrypsin, chymase
15. Complement inhibitors- Replace natural complement inhibitors if they are deficient.

16. Anesthetics substance- Anesthetic anti-pain during the leech "bite".

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