



Efficacy Of Jalaukavacharana (Leech Therapy) In The Management Of Perianal Abscess (Apakva Stage): A Case Report Study.

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Abstract

Background: *Vidradhi* (abscess) is a localized inflammatory swelling described in Ayurveda as a *Pitta-Kapha* dominant disorder. *Jalaukavacharana* (leech therapy) is a type of *Raktamokshna* (bloodletting) indicated for inflammatory and suppurative conditions. *Raktamokshana* described in Ayurvedic classics for conditions involving *pitta* and *rakta* vitiation, characterized by inflammation, severe pain, swelling, suppuration. A perianal abscess is an acute infective condition causing severe pain, swelling and redness around the anal region. In the early and chronic inflammatory stage, leech therapy offers a minimally invasive and natural approached for local decogesion and pain relief. Acharya vaghbhata has advocated its use in inflammatory condition like *vranashopha*, *Raktapradoshaja vyadhi* characterised by localised swelling, discoloration, burning sensation and pain. The successful outcome with *jalaukavacharan* can be attributed to the synergistic effect of leech saliva ,which contains bioactive compounds with anti-inflammatory, analgesic and thrombolytic properties. Its role in improving local blood circulation and reducing localised inflammation likely contributed to rapid symptom resolution.

Keywords - leech therapy, *Jalaukavacharan*, *Vidradhi*, Perianal Abscess.

Introduction

Vidhradhi considered one of the *ashukari vyadhi* (acute disease) of shalya tantra in ayurveda due to its rapid progression and systemic involvement if not treated properly.

Abscess is a localised collection of pus (dead, dying Neutrophils and proteinaceous exudate ⁽¹⁾. Most cases originate from cryptograndular infection, through secondary causes include Inflammatory bowel disease (IBD), Trauma, Tuberculosis, HIV/AIDS, and Diabetes Mellitus, Staphylococcus infection, Pyaemic organism in blood thus formation of pyogenic membrane having fibrinous exudates, oedema and cells of inflammation ^{(2)(3) (4)}. Abscess contain hyperosmolar material that draws fluid in the cavity, which increases pressure and lead to pain.

Vidradhi (perianal Abscess) is an inflammatory condition characterized by localized swelling, pain, redness, and suppuration, similar to abscess in modern science. In modern medicine management usually involves incision and drainage along with antibiotic therapy and pain management.

According to ayurveda such clinical features resemble condition described under *Vidradhi* (Abscess) and *Vranashopha* (inflammatory swelling). Acharya Sushruta, The Father of Indian Surgery, defines *vidradhi* is a deep seated inflammatory swelling described in ayurveda, which can progress to form an abscess if not treated early because especially affecting *rakta*, *mamsa*, and *meda dhatus*. In the *Apakva* (unripe) stage, *Vidradhi* in unripened stage present as a hard, painful and inflamed mass without pus formation. When the swelling is cut open in the unripe stage it would be cause great destruction of muscles, veins, ligaments, joints and bone, tearing and appearance of a traumatic abscess. This stage requires prompt treatment to reduce inflammation and prevent suppuration ⁽⁵⁾⁽⁶⁾. *Vranashoph* is described acharya vaghbhat as a *Raktapradoshaja vyadhi* (blood borne disorder), predominantly caused by vitiation of *pitta* and *rakta* leading to discoloration (*vaivarnyata*), burning sensation (*Daha*), pain (*toda*), and swelling (*shotha*). ⁽⁷⁾

The condition arises due to vitiation of *Pitta* and *Kapha doshas* leading to *rakta dusti* and tissue inflammation. Among various treatment modalities, *Raktamokshna* is advised in *Sushruta Samhita* as a primary therapy for *Raktapradoshaj vyadhi* (blood-borne) inflammatory disorders. *Jalaukavacharana*, being a mild and safe method of *Raktamokshna*, is specifically indicated for *Pitta-Kapha* predominant conditions like *Vidradhi*. Acharya sushruta categorised *jalaukacharan* under *anushastra karma* (para surgical condition). ^{(8) .(9)}.

Action of leech is due to the biological substances present in saliva. This saliva contains more than hundred bioactive substance which includes an antiplatelet aggregation factor, anesthetic and anti-inflammatory and antibiotic agent. These agents anaesthetize the wound area Making the bite of leech painless to its host and dilate blood vessels to increase blood flow to the site of bite. ^{(10) , (11)}.

Case Presentation

A 38-year-old female patient presented to the shalyatantra OPD with complaints of pain, redness, and swelling near the perianal region for 4 days. Accompanied by mild fever and difficulty in sitting.

History - There was no history of diabetes or trauma. The condition started as a small painful nodule on left perianal region, gradually increasing in size and tenderness. The patient experienced difficulty in sitting and mild fever.

Local examination revealed a tenderness, erythematous swelling of approximately 4 × 5 cm with palpitation showed raised local temperature, erythema and warmth, tenderness, firm consistency without fluctuation (non suppurative stage). The patient had mild fever (99.5 F), Pulse 84/min, BP – 120/80 mmhg . Diagnosis was made as *Apakva Vidradhi* (perianal abscess) (Non suppurative stage).



Fig 1 - Local examination of Affected part.

Treatment Protocol

The patient was treated with *Jalaukavacharana* under aseptic precautions.

- The area was cleaned with *Triphala kwatha* before application.
- Two healthy leeches were applied at perianal region near the inflamed area and allowed to suck for about 30 minutes.
- After detachment of leech there was a triangular wound created by mouth of the leech.
- The blood came out from the wound.
- Bleeding from wound was check, Application of Haridra powder and pack bandaging.
- The procedure was repeated on Day 3 and Day 5.
- The patient was advised oral *Gandhaka Rasayana* (250 mg BD) and *Triphala Guggul* (500 mg BD), *Gandharva Haritaki Churna* 5gm HS for 7 days.

Oral medication for 7days	<i>Jalaukavcharan</i> (Alternate day)
<i>Gandharva Haritaki churna</i>	Day 1 – 30 min
- <i>Gandhaka Rasayana</i> (250 mg BD),	Day 2 – 25 min
- <i>Triphala Guggul</i> (500 mg BD)	Day 5 – 35 min



Fig 2 – Application of leech. (First setting) (Day 1)



Fig 3- Characteristics of leech application.



Fig 4 – Application of Leech – Third setting (Day -5)

Observation and Results

Parameter	Day 1	Day 3	Day 5	Day 7
Pain (VAS Scale)	8/10	5/10	2/10	0/10
Swelling (cm)	4×3	3×2	2×1	Almost nil
Redness	+++	++	+	Absent
Local Temperature	Raised	Mild	Normal	Normal
Loss of function	No any function present	No any function present	Mild function present	Normal function present

Discussion

Leech therapy offers anti-inflammatory, analgesic, and anticoagulant, thrombolytic, antimicrobial, micro-circulation enhancing effects due to bioactive substances such as hirudin(anticoagulation), calin (platelet aggregation inhibitor), bdellins, and eglins (protease inhibitors with anti-inflammatory activity), and hyaluronidase (spreading factor). These compounds reduce pain, swelling, and promote circulation. From an ayurvedic perspective, *Jalaukavacharana* purifies the vitiated blood (*rakta vruddhi*), alleviates *Pitta-Kapha doshas*, and enhances healing (*vrana ropana*).^(12 and 13)

Removal of congested blood, which reduced tissue tension and pressure, leading to mechanism pain relief this is used in *Apakva vidhradhi*.

Leech saliva has compound that block nerve conduction locally, providing immediate pain relief without the systemic side effects of opioids or NSAIDs.

Compounds such as Histamine - like substances, Acetylcholine and Nitric Oxide enhancers can improve local circulation, thus reducing pain associated with ischemia. Hirudin functions by preventing the formation of clots, which helps maintain capillary blood flow in an inflamed region.

The combined use of *Gandhaka Rasayana* 240mg 2BD and *Triphala Guggul* 500mg 2BD, *Gandharva Haritaki Churna* 5gm HS. supported detoxification and tissue repair.

Conclusion

Jalaukavacharana is a safe, effective, and minimally invasive procedure in the management of perianal abscess (*Apakva Vidradhi*) in their early stage. It provides rapid relief in inflammation, pain and prevents further suppuration or surgical intervention as an adjunct to surgical and medical management, it can enhance outcomes and minimize recurrence. The therapeutic effects arise primarily from bioactive compounds in leech saliva, including anticoagulants, anti-inflammatory agents, vasodilators, and analgesics, thrombolytic, antimicrobial, micro-circulation. These substances work together to improve local blood flow, reduce venous congestion, minimize swelling and provide pain relief. This case supports classical ayurvedic claims regarding the therapeutic efficacy of leech therapy in inflammatory conditions.

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