

A REVIEW ARTICLE ON RAKTAMOKSHAN: A PARASURGICAL PROCEDURE

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ABSTRACT

“Tvakdosha Granthya Shopha roga Shonitajascha ye, Raktamokshana Sheelinam na bhavanti Kadachanah” Su.Su.14/34 Ayurveda has got eight speciality, among them *shalyatantra* (surgery) has been important and modified branch since ancient era. *Raktamokshan* (Bloodletting), a popular parasurgical procedure in ayurvedic system. *Raktamokshan* indicated as therapy of choice in many diseases. *Raktamokshan* is an effective and safe remedy for *Shonitashraya Vyadhi* (Blood borne diseases). Modern medical science is now fully developed and most acceptable medical science across the world but still it is struggling in the management of various chronic disorders.

Parasurgical procedures like *Raktamokshan* is valuable answer to it. There are different types of *Raktamokshan* mention in ayurvedic texts according to doshas predominance. Among various modalities of *Raktamokshan*, *Jalaukavacharan* (leech therapy) and *Siravedha* (venepuncture) are more in practice due to its simplicity. Leech therapy can be safe and better alternative to manage blood born disorders. Medicinal leech therapy or *Jalaukavacharan* is used in a variety of inflammatory conditions. Its mode of action depends on the injection of leech saliva into patients tissues during the process of blood sucking.

KEYWORDS: *Raktamokshan*, Blood born diseases, *Jalaukavacharan*, *Siravedha* etc.

INTRODUCTION

Indian Ayurveda Surgery has probably the first detailed, rational, systematic description of *Raktamokshana* for several illnesses. *Raktamokshana* is also considered one among *Shodhana* (Purificatory) procedures. *Raktamokshana* means letting of blood which is mainly indicated in certain disease state especially when there is *Raktadushti* and also during

physiological function. *Sushruta*, Father of Indian Surgery, has given all the information regarding bloodletting in detail in his treatise, “*Sushruta Samhita*”. The process of *Raktamokshana* can be traced back to the Vedic period only and not beyond that. In the *Koushika* sutra of *Atharvaveda*, references of bloodletting (*Raktamokshana*) by leech are available. Bloodletting indeed represents one of the oldest human efforts on medicinal therapy. It is hard but a fact to believe that in 18th century when the doctors could do nothing to the patients coming to them but were just drawing blood as much as possible from them. To expel out the vitiated blood, seven procedures were advocated: Venesection (*Sira Vedhan*), Horn application (*Sringa Avacharana*), Gourd application (*Alabu Avacharana*), Leech application (*Jalauka Avacharana*), Scrapping (*Pracchanna Karma*), Cupping glass application (*Ghati Yantra Avacharana*) and Needle application (*Suchi Avacharana*, bloodletting is one of the purification therapies where the disease causing factors i.e. vitiated humors are expelled out from the body in addition to relief from the disease symptomatology as well as without recurrence of the disease. Hence it is said to be a complete treatment.

TYPES OF RAKTAMOKSHAN

Without using shastra (Non invasive)

1. *Shring* or Horn: By sucking action.
2. *Alabu* or cupping by vacuum action.
3. *Jalaukavacharana* or Leech therapy.

With Shastra (Invasive)

1. *Pracchana* (Scraping).
2. *Siravedha* or venipuncture.

INDICATIONS OF DIFFERENT MODALITIES

Doshik Base

Vata - *Shringa*

Pitta - *Jalauka*

Kapha - *Alabu*

Sarvang - *Siravedha*

Local - *Prachhana*

Condition of Blood

Avagadhe Jalaukasyat Pracchanam pindite hitam Sira angavyapakerakte, shringalabu twachi sthite Su.Sha. 8/26.

1. SHRINGA OR HORN

Its use is specific to *Vata* disorders being *Snigdha* in nature.

It is a kind of *Nadiyantra*.

This denotes the horn of cow.

Dimensions: length 18 *angula* attaching portion (mouth) diameter 3 *angula*. Sucking end hole size mustard seed.

2. ALABU YANTRA OR TUMBI

It is specifically used in *Kapha dosha*.

It is because the fire is used to create vacuum in the *Alabu*; therefore, it may enhance the *Pitta dosha*.

The diameter 3-4 *angula* and it has two openings on either side.

3. PRACHCHANA KARMA

Used when *Doshas* are in *Twakgata* and *Raktagat Doshas*. The *pracchana karma* is very simple method of bloodletting and is also helpful in *Siravedha*, *Jalaukavacharan*, wet cupping. *Shusruta* states that *Pracchana karma* is indicated in diseases where the vitiated blood are located in form of *grathit or pindita* ("Pracchanam Pindite Hitam).

Properties

- 1) *Ruju* (straight),
- 2) *Asankirna* (not very near to each other),
- 3) *Sukshma* (small and fine),
- 4) *Sama* (even)
- 5) *Anavagadha* (not very deep),
- 6) *Anuttana* (Not very Shallow)

SIRAVEDHA

Blood letting with sharp instrument is *Siravedha* (venepuncture) and *Pracchana* (scraping).

The significance of *Siravedha* is too much and it can be realize that it is the half therapy of *Shalya chikitsa* (surgical treatment).

Benefits of *Siravedha*

1. Removal of Toxic metabolic wastes.
2. Stimulates new blood cell formation.
3. May stimulates bone marrow.
4. Cure the ailments fast in comparison to other modalities.

TYPES OF *JALAUKA* (LEECHES)

According to *Acharya Sushruta Jalauka* can be broadly classified into two groups.

- 1) *Savisha* (Poisonous).
- 2) *Nirvisha* (Non-poisonous).

Acharya Sushruta has mentioned six poisonous and six non-poisonous strains of leeches. Not all the strains of leeches mentioned by *Sushruta* are identifiable today.

S. No.	Poisonous leeches	Non-poisonous leeches
1	<i>Krishna</i>	<i>Kapila</i>
2	<i>Karbura</i>	<i>Pingala</i>
3	<i>Alagarda</i>	<i>Shankumukhi</i>
4	<i>Indrayudha</i>	<i>Mushika</i>
5	<i>Saamudrika</i>	<i>Pundarikmukhi</i>
6	<i>Gochandana</i>	<i>Saavarika</i>

1. *Savisha* (Poisonous Leeches)

Leeches born in dirty water, born in areas where dead fish, frog and snake putrefy with their excreta, those which are red, white or very black in colour, which are over active, stout and slimy, those which have varied rainbow like lines on their back, are poisonous (*Savisha*) and should be rejected.

2. *Nirvisha* (Non-poisonous Leeches)

Leeches born in clean water are non-poisonous (*Nirvisha*). They are bluish black in colour like algae, round (spindle shaped), their back is dark and belly is yellowish, they are slender.

Unhealthy *Jalauka*

1. Broad in its middle part.
2. *Vistirna*.
3. Has slow movement and deformed shape.

4. Attach to the victim or patient with difficulty.
5. Sucks less quantity of blood.

Healthy *Jalauka*

1. Non-poisonous *Jalaukas* live in deep and fresh water where there is the abundance of lotus, algae etc.
2. The leech which is used for therapeutic purpose is known as *Hirudo medicinalis*.

METHOD OF COLLECTION AND PRESERVATION OF LEECHES

Leeches are collected from ponds/streams that contain lotus and *spirogyra*, with a piece of wet leather or meat piece. After collecting the leeches, they should be kept in large-sized pitcher (earthen pot) filled with water. Pulverized zoophytes and powder of dried meat and aquatic bulbs should be thrown into the pitcher for their food and blades of grass and leaves of water plants should be put into it for them to lie upon. The water should be changed every third day and feed should be dropped inside the pitcher. After seven days the pitcher should be changed i.e. the leeches should be transferred to a new pitcher at the end of every seven consecutive days. Now a days Leeches are purchased from companies that function as leech farms.

IMPORTANCE OF *JALAUKAVACHARAN*

As a swan can separate the water from a mixture of milk and water; likewise, a *Jalauka* can separate impure blood from the pure and it sucks impure blood only. A.H.Su. 42/26

INDICATIONS OF LEECH THERAPY (*JALAUKAVACHARANA*)

During the middle ages, the golden era for bloodletting, leeches were used by almost all physicians to cure anything from gout to headaches, but now its use is restricted to certain centres for specific conditions. The world is coming back to leeches after the effects of leeching were clinically studied with evidence based documentation, especially in skin grafts refusing to take up and non-healing ulcers. In recent past years, various studies (clinical as well experimental) have been conducted globally to evaluate the efficacy of leech therapy in various ailments.

Classical indications

Gulma (abdominal lump)

Arsha (piles)

Vidradhi (abscess)

Kustha (skin diseases)

Vatarakta (gouty arthritis)

Other indications

1. **Venous disease, varicose veins:** Leech therapy has been proven to help patients suffering from venous diseases. Medicinal leech is effective in the management of complicated varicose veins, it heals ulcer, decreases the oedema and limb girth, and decreases hyperpigmentation. Leeches have also been used after breast surgery to relieve the possible complication of venous congestion at the nipple. It is also used to treat post phlebitis syndrome in which venous valves are obliterated by deep vein thrombosis.
2. **Peripheral vascular diseases:** Leech therapy can be effective in management of early stage of Burger's disease and other peripheral vascular diseases.
3. **Diabetic foot ulcer:** Leech therapy is effective in the management of diabetic foot ulcer.
4. **Non healing ulcer:** Leech application is significantly effective in pain management in the treatment of non-healing ulcers.
5. **Thrombosed Haemorrhoids:** *Jalaukavacharana* (leech therapy) is very effective alternative treatment in the management of thrombosed haemorrhoids. Severe tenderness and bluish-black discolouration are the characteristic features of thrombosed pile mass. Heparin present in the saliva of leech acts as anti-inflammatory agent thereby reducing inflammation maintains normal circulation and recovering discolouration. Anesthetic agent present in saliva of leech reduces pain and tenderness and giving symptomatic relief.
6. **Arthrosis:** Leech therapy is an effective and safe treatment in symptomatic management of degenerative knee. It causes rapid reduction of pain associated with osteoarthritis of knee.
7. **Gout (*Vatarakta*):** Leech therapy is effective in relieving pain, swelling, erythema in acute gout. Leech application has significant role in treatment of *Vatarakta*. It reduces *sandhisoola* (Joint pain), *Sandhishopha* (Joint swelling), *Sandhivaivarna* (Erythema), and *Sandhidaha* (burning sensation at joint).

8. In Plastic and reconstructive surgery (Leeches historically used to remove vitiated blood are now used extensively by reconstructive surgeons needing to remove stagnant blood from a flap or reattached limb): In 1985, medicinal leeches were used successfully to reattach the ear of a five year old boy. Since then, leeches have been widely used to reduce venous congestion in fingers, toes, ears, and scalp reattachments, and replant, limbs or other body parts reattached after traumatic amputation.

CONTRAINDICATIONS OF LEECH THERAPY (*JALAUKA VACHARANA*)

Leech Therapy cannot be applied in all the patients and it is not recommended under the following medical conditions and diseases.

- a) Absolute Hemophilia.
- b) Anticoagulant medication eg. Warfarin, Heparin, Marcumar. (Aspirin and Clopidogrel are not contraindicated).
- c) Severe Anaemia.
- d) Erosive gastritis and potential gastrointestinal bleeding.
- e) During chemotherapy (or people who are on immunosuppressive medication).
- f) Individuals with HIV infection.
- g) Cachexia (of any cause).
- h) Severe allergic diathesis (allergy to foreign proteins).
- i) Hypotension.
- j) Active tuberculosis.
- k) Pregnancy.
- l) Mental disorders during acute episodes.
- m) Severely ill and bed ridden patients.
- n) Extremely fearful patient.

CONCLUSION

Raktamokshana (Bloodletting), a popular para surgical procedure in Ayurvedic system of medicine is time tested. Bloodletting is one of the purification therapy where the disease causing factor i.e. vitiated humours are expelled from the body in addition to relief from disease symptomatology as well as without recurrence of the disease. Hence it is said to be a complete treatment. It answers several chronic problems of ill health.

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