



**RAKTAMOKSHAN (BLOODLETTING) ADVANCING PARA-SURGICAL PRACTICE IN
MODERN HEALTHCARE - REVIEW ARTICLE**

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ABSTRACT

In the classical text of Ayurveda, Acharyas emphasize the Shodhana therapy as the line of treatment in various places. Among these various Shodhana therapies, Raktamokshan is indicated specially because Rakta is mainly involved as Dushya in Samprapti Ghataka. Raktamokshana therapy is done for the purification of blood by removing toxic substances. It is a para-surgical procedure that can cure several disorders if done properly. This method should be scientifically adopted all over the world through the guidelines mentioned in Ayurveda. This procedure is done using Jaloka, Sharp instrument, and Sharp needle. Raktamokshana which can be completed within a short period of time can avoid skin diseases, blood-borne disorders, edema, lymph node enlargement, etc. In the present society as there is an increase in psychosomatic and stress-related diseases, there is a need of therapeutic procedure such as Raktamokshana. In Skin disease Raktamokshana by Jaloka (Medical leech therapy).

KEYWORDS: Ayurveda, Raktamokshana, Para-surgical procedure, Medical leech therapy.

INTRODUCTION

Ayurved and its basic principles

According to Ayurved, our body is formed by the combination of Dosha (Vata, Pitta & Kapha), Dhatu (Sapta Dhatu viz. Ras, Rakta, Mans, Meda, Ashthi, Majja, Shukra) & Mala (Purish, Mutra, Swed). All the constitute or tissues of the body contains all the three i.e. Dosha, Dhatu & Mala in subtle amount. Out of these Tridoshas are considered more important as they form a base in nourishment & development of the body. Further, whenever there is disequilibrium of Doshas occurring, it directly affects the health & pathology is introduced.^[1]

The basic Ayurvedic treatment is based on two principles such as Shodhan chikitsa (Elimination Therapy) in which elimination of excess Doshas from the body is facilitated, and Shaman chikitsa (Palliative or Internal medicine), where the increased Doshas are brought into equilibrium with the help of Herbo-mineral medicines. However, out of the two therapies, 'Shodhan chikitsa' has great importance and Raktmokshan is one of them.

AIM OF STUDY

The aim of this review article is to explore and analyze the role of Raktamokshan (bloodletting) as a para-surgical procedure in modern healthcare. It aims to

assess the advancements, effectiveness, and potential benefits of integrating this ancient practice into contemporary medical approaches, contributing to the advancement of para-surgical techniques. This review article helps to student and researchers.

MATERIALS AND METHODS

Importance of Raktmokshan

Raktamokshan or Bloodletting is given prime importance in Shodhan chikitsa. It is said that a number of diseases which are otherwise incurable can easily & effectively be cured only by Raktamokshan alone.

Definition of Raktamokshan (Blood-letting therapy)

Expulsion or removal of vitiated blood from the body for therapeutic purposes is known as Raktamokshan. This can be done either through the prominent superficial veins with the help of simple scalp-vein canula (Sira-vedh), with the help of Leech (Jalokavacharan), by taking multiple Incisions on a particular site (Prachhan karma), by sucking blood with the help of animal horn (Shring) from the site where prior incision is taken or removing blood with the help of empty dried bottle gourd (Alabu).

Effect of Raktamokshan^[2]

Rakta, the blood being the vehicle to carry & transport absorbed nutrients, oxygen, metabolites etc. from place to place. So, correction of any abnormality in the blood by taking it out, solves a number of problems. Also, those who get 'Raktamokshan' regularly as a routine, never suffers from Twak dosha (various skin problems), Granthi (cyst, tumours), Shoph (inflammation) and Raktaj roga (Kushtha, Nilika) etc., such is the miraculous effect of Raktamokshan. Acharya Sushrut further says that, this is the only therapy which helps in eliminating all the three vitiated Doshas (Vata, Pitta & Kapha) at a time. He further advocates that if all the five-fold purificatory procedure cannot be performed due to lack of time then, even 'Raktamokshan' can serve the purpose.

TYPES OF RAKTAMOKSHAN^[3]

1. Ashastra Raktamokshan

In this type, the vitiated blood is taken out or removed only by means of Jaloka (Leech application). Hence, we can say that this is done without using any cutting instruments.

2. Sashtra Raktamokshan

This is done with the help of surgical blade. An incision is made at the desirable site followed by the removal of blood by means of sucking. Depending upon the modality used, this is further sub-divided into 4 types such as

- Prachhan karm (Bloodletting through multiple incision)
- Alabu (Vacuum extraction by using 'bottle gourd')
- Shring (Sucking by mouth through animal horn)
- Sira vedh (Vene puncture).

1) Raktamokshan with the help of 'Prachhan karm'

In this procedure, without injuring the Joint capsule, Tendons, Bones & Marma sthana (vital points) multiple incisions are made with 'Utpal patra sashtra' i.e. scalp blade, vertically & parallel to the course of local blood vessels at the desired site. After the 'Prachhan karma' dressing is done with aseptic precaution. If transverse incisions are made under skin then damage to blood vessels can occur.

Prachhan karm is useful in conditions like para phimosis, cellulites, localized collection/ accumulation of fluid under the skin & sub coetaneous tissues, hematoma, early stage of filariasis (Lymph edema), snake, scorpion or insect bite etc.

Principle

Following the multiple incisions, the vitiated blood & accumulated Doshas comes out of the body. So, we can say that the main purpose of Prachhan karma (by facilitating drainage of blood from the affected site) is to relieve tension or the local pressure. At the same time, this also helps to remove the toxins & other waste products from that site.



Image 1: 'Prachhan karm'.

1) Raktamokshan with the help of 'Alabu Yantra'

This is indicated when there is predominance of 'Kapha Dosh'. While there are two openings of 'Shring Yantra', there will be only one opening for 'Alabu Yantra'.

2) Raktamokshan with the help of 'Shring yantra'

This is indicated when there is predominance of 'Vata Dosh'. 'Shring yantra' is a very simple instrument made up of a Cow's or Bull's horn with both of its ends open.

3) Raktamokshan with the help of 'Sira-vyadhan'

This can be termed as 'Vene-puncture' and is one of the easiest mode of 'Raktamokshan'. Sushruta gives utmost importance to this technique. It is said that half or rather entire Shalya Tantra treatment is equivalent to Sira-Vyadhan chikita (Bloodletting by Vene-puncture) alone. The region behind is that this is the only therapy which helps in eliminating all the three vitiated Doshas (Vata, Pitta & Kapha) at a time.

RAKTAMOKSHAN WITH JALOKA (Leech Blood Letting)

In this method, Raktamokshan is done with the help of 'Jaloka' i.e. Leeches are applied on the desired site for bloodletting. It is considered most unique & most effective method of bloodletting. Here, the vitiated 'Doshas' are removed from the body without using any cutting instruments, hence Raktamokshan by means of 'Leech' comes under 'Ashastra' category.

Description of Jaloka in Ayurveda

As the very basis of life for 'Leeches' is water, since their site of dwelling is 'Jal' i.e. water, the 'Leeches' are known as 'Jaloka'.

Types of Jaloka (Types of leech)

1. Poisonous (Savish Jaloka)
2. Non-poisonous (Nirvish Jaloka)

Further, six different types of Leeches are found in both poisonous & non-poisonous category. Basically, these Jalokas are named according to their appearance i.e. their external look or color. The Savish Jaloka described in texts are named as Krishna, Karbura, Alagarda, Saamudrika, Indra-yudha and Go chandana, whereas, Nirvish Jaloka mentioned are Kapila, Pingala, Shankh-mukhi, Mushika, Pundarik-mukhi and Saavarika.

ABOUT LEECHES - MODERN PERSPECTIVE^[4]

- **Materials and equipment's for Leech therapy**

Ideally a separate leech therapy room is preferred. This room should be well equipped with Patient bed, Separate tanks for storage of leech, dressing trolley having gloves, gauze pieces,

Normal saline, blood pressure instrument, emergency medicines like Atropine, Hydrocortisone, Adrenaline, Ethamsyl, Avil, IV Fluids etc. to combat reactions if any. Also, adequate number of sterile tray for cleansing of leech, cleansing material like turmeric powder etc. dressing materialsto be kept ready.

- **Leech therapy**

PURVA KARMA**Preparation of patient**

This includes- Selection of suitable patient, Laghu Aahar (Light semi- solid diet) like Yavagu etc is advocated before the procedure. Coagulatory disorder like hemophilia should be ruled out. Similarly, precautionary measures should be taken while handling the Anemia, Diabetes, Hepatitis, HIV patients. No Snehan i.e. oleation should be allowed. However, mild Swedan (half hour before) to the site of bloodletting can be given. The desired site is properly washed with cold water. Give the patient either supine position or slight propped-up position.

- *Note: One should not apply Spirit gauze or turmeric to clean the area in any condition.*

MAIN PROCEDURE (PRADHAN KARMA)

The desired site is cleaned with wet gauze. Thereafter, the Leech is held at its neck with fingers & applied directly to the skin, 4-5 Leeches are applied at a time depending upon the necessity. Once Leeches start sucking the blood, they are covered with wet gauze & cold water ispoured on them from above time to time, so as to make Leech comfortable during sucking.

- *Note: If Leech do not catch the site by its own, in such condition a small niche or prick induced bleeding may be required so as to facilitate the*

sucking procedure.

The Leech when once starts sucking the blood, elevates its neck, and fixes its head to the supporting point of skin. One can observe wave like movements indicating sucking of blood.

When Leech becomes fully satisfied with its food, it leaves off the skin of he patient & drops itself down. If not- then the patient may feel itching sensation which indicates impure blood from that spot is no more available for the Leech. In such a case, a little turmeric powder is placed on the sucking point of the Leech & immediately the Leech takes s away its mouth from that point.

Precaution

One should not apply Leeches to major veins like Femoral or Jugular veins and to the delicate parts like Breast, Penis or Eye lids. Used Leeches should be kept in separate jars.

Amount of blood loss

Each Leech sucks around 6 to 10 ml of impure blood at one application.

POST PROCEDURE CARE (PASHCHAT KARMA)**Post procedure Patient's care**

Leech is removed from the site & the site is cleaned with antiseptic solution (betadine/savlon) or normalsaline. Turmeric powder is placed to the bleeding site. Bandaging is done to arrest the bleeding.

- *Note: Sometimes the oozing from the site do not stop, in such cases wound can be sealed with the help of tincture benzene.*

Post procedure Jaloka care

Leech after the use is kept in an empty tray. Turmeric powder is placed on its mouth so as to induce vomiting. Immediately after this one may find jets of black colored blood being emitted by the Leeches. A Leech has got an anti- coagulant chemical called Hirudin. While sucking the blood this Hirudin prevent clotting of blood.

Leech Therapy Photo Gallery

Image 2: Leech Application Near Knee Joint.



Image 3: Leech Application Near Ankle Joint.



Image 4: Leech Application on Hand.



Image 5 - Leech Application Near Face and Neck.

INDICATION & UTILITY OF LEECH THERAPY IN CURRENT PRACTICES^[5]

1. It is used effectively in the management of non-healing ulcerative lesions like Diabetic ulcer, Leprotic wound etc. as it helps to improve the local blood circulation. Hence, healing is promoted.
2. It relieves vascular congestion. So, can be effectively used in conditions like long standing Varicose ulcers, Filariasis, post-op. skin grafting lesions.
3. It is used in Arthritis, Sprain or spasm to relieve the
4. pain, inflammation & discomfort symptomatically.^[6,7]
5. Used in Abscess, Cellulites, Thrombophlebitis and Varicose Veins
6. Useful in third degree thrombosed prolapsed Piles.
7. Useful in Atherosclerosis of the limb as it improves circulation.
8. Jaloka siddha oil is used locally to treat hyper pigmentation.
9. Useful in various skin disorders like Eczema, Pimples, and Psoriasis etc.

9. Research is going on to study the efficacy of Leech in the management of MI (where it is used around the pericardium) & stroke as it has got an anti-coagulant chemical called Hirudin which resembles drugs like Heparin & Strepto-kinase.

DISCUSSION

Ayurveda is the science of wellbeing as well as the diseases curable. The peculiarity of Sushrut in the field of treatment is Raktmokshan - chikitsa (bloodletting) used for management of many disease. Sira vedha is useful in the case of extensive vitiation of Rakta. There are various type of Raktmokshan mentioned such as Sira vedhan (vene puncture), Shring (application of horn), Jaloka (application of leeches), Prachchan karma (scarification or multiple incision) etc.

The sira vedha may performed on the basis of experience and discretion, indicated in all diseases which are curable by bloodletting modality. Further, Siravedha (vene puncture) is said 'chikitsardh' meaning half of the treatment described in Shalya Tantra (Ayurvedic surgical stream)

SCOPE OF RAKTAMOKSHAN IN CURRENT PRACTICES

Leech therapy is considered most unique & most effective method of bloodletting. Here, the vitiated 'Doshas' are removed from the body without using any cutting instruments. Leech has made a comeback as a new remedy for many chronic and life-threatening abnormalities, such as cardiovascular problems, cancer, metastasis, and infectious diseases. In the 20th century, leech therapy has established itself in plastic and microsurgery as a protective tool against venous congestion and served to salvage the replanted digits and flaps. Many clinics for plastic surgery all over the world started to use leeches for cosmetic purposes. Despite the efficacious properties of leech therapy, the safety, and complications of leeching are still controversial.

CONCLUSION

The topic being vast, this Paper attempts to touch maximum aspects of Ancient bloodletting techniques with special reference to Raktamokshan described in Ayurveda leaving further scope of study to include other aspects such as mechanism of action in respective diseases, and to validate its efficacy with evidence based clinical trials which will ensure and establish the Leech therapy globally.

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