

AN IN-DEPTH REVIEW OF RAKTAMOKSHANA (BLOODLETTING) THERAPY

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(Published Online: February 2022)

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Article Received: 08/12/2021 - Peer Reviewed: 17/12/2021 - Accepted for Publication 18/12/2021



ABSTRACT

An important para surgical method of bloodletting advocated by *Acharya Sushruta* is known in *Ayurveda* as *Raktamokshana*. According to *Acharya Sushruta*, it is one of the procedures under the umbrella of *Panchakarma* therapies. *Raktamokshana* consists of two words 'Rakta' meaning blood and 'Mokshana' which means to liberate or set free, hence *Raktamokshana* is the free flow of blood out of the body. *Raktamokshana* therapy can be performed in two ways. 1. *Shashtra Visravana* (using sharp instruments) or 2. *Anushastra Visravana* (without the use of sharp instruments). *Shashtra Visravana* is further classified into *Pracchana* (scraping or scarification) and *Siravyadhana* (venepuncture), while *Anushastra Visravana* is further classified into *Jalauka Avacharana* (leech therapy), *Shringa Avacharana* (horn application), *Alabu Avacharana* (cupping therapy). Each has its applications according to *Dosha* involved. For *Vata Dushta Rakta*, *Shringa Avacharana* is used; for *Pitta Dushta Rakta*, *Jalauka Avacharana* is used; and for *Kapha Dushta Rakta*, *Alabu Avacharana* is used. This article seeks to explore the importance of *Raktamokshana*; when it is properly administered there is a normalization of physiological processes in the body, skin disorders and inflammation are hindered.

Keywords: *Alabu, Jalauka, Panchakarma, Raktamokshana, Sringa.*

INTRODUCTION

There are two types of treatment methods according to *Ayurveda* principles, these are *Santarpana* or *Bruhana* and *Apatarpana* or *Langhana*¹. *Langhana* is further

classified into two types viz *Shodhana* and *Shamana*². *Panchakarma* procedures are generally of the *Shodhana* nature where the vitiated *Dosha* is expelled out

of the body through the nearest route available. The *Panchakarma* procedures are *Vamana*, *Virechana*, *Basti Karma*, *Nasya Karma* and *Raktamokshana*^{3,4}. *Acharya Sushruta*⁵ was from the *Dhanwantari* school believed that *Raktamokshana* was an important para surgical therapy. *Acharya Sushruta* clearly emphasizes the significance of *Rakta* in his *Samhita* there are demarked chapters describing *Rakta*, outlining the procedure of *Raktamokshana*, the classifications, indications and contraindications in precise details. But *Acharya Charaka* mentioned a limited amount of information regarding *Raktamokshana*. *Ayurveda* believes that blood or *Rakta* is the carrier of *Ayu* (life), so the quality of the blood has a direct influence on the four main pillars of life *Atma* (soul), *Manas* (mind), *Indriya* (Senses) and *Sharira* (body). When the blood is pure and free from toxins and waste materials it sustains life and prevents the manifestation of diseases. When the blood becomes impure there is a need to remove it from the body for the management of diseases. *Raktamokshana* therapy is a blood cleansing and purification process. It is a therapeutic cleaning process mentioned in *Ayurveda*. It is one of the treatments available in *Panchakarma* therapy. *Raktamokshana* is a Sanskrit word meaning to 'let blood out'⁶. The vitiated blood in the body is expelled out to reduce the number of toxic substances found in blood-borne disorders. This procedure has a certain amount of risk factors involved; hence it should be performed by an expert and the patient should be carefully informed about the risks and advantages, also blood tests like bleeding time and clotting time, HbsAg, HIV and Hb% should be done before and proper informed consent should be taken before performing the procedure. According to *Acharya Charaka*, *Rakta* is one of the *Dasha Pranaayatana*⁷ (places where vital life energy resides). According to *Acharya Sushruta*⁸, *Rakta* is the fourth *Dosha* of the body. *Rakta* is one among the *Sapta Dhatu* in the body and *Rakta Dhatu* is formed when the *Rasa Dhatu* travels via the *Yakrut* and *Pliha* before being coloured by the *Tejo Mahabhuta*⁹. *Rakta* is *Bahya Rogamarga* (external pathway) for diseases like *Masha* (mole), *Vyanga* (discoloured patches on the skin), *Gandalaji* (glandular ulcers on the face), *Arbuda*

(tumours), *Gulma* (abdominal tumours) and *Sotha* (swelling)¹⁰. The *Suddha Rakta Lakshana*¹¹. (Signs of pure blood) are observed when the blood is *Tapainya* (red hot gold), *Indragopa* (red insect), *Padama* (red lotus), *Alakata* (*Laksha Rasa*), *Gunja Phala* (seeds of *Abrus prectoris*), *Asahatama* (liquid in consistency) and *Avivarnama* (having proper colour). The *Suddha Rakta Purusha*¹² (signs and symptoms of pure blood) is *Prasanna Varna* (clear complexion), *Indriyaarthnichantama* (proper sensory perception) and *Pushti Bala Utpana* (properly nourished and strong body). The *Rakta Kshaya Lakshana*¹³ (signs of decreased blood) is *Amla Madhura Akansha* (craving for sweet and sour tastes), *Murcha* (unconsciousness), *Twacha Rukshata* (dryness in the skin), *Shira Shatilya* (flaccidity of veins) and *Vata Unmargagamita* (upward movement of *Vata Dosha*). The *Rakta Vriddhi Lakshana*¹⁴ (signs of increased blood) is *Rakta Anga Netra* (redness of eyes and body), *Shirnama Purnatavam* (veins are filled), *Daha* (burning sensation in body), *Mada* (confusion), *Nidra* (sleepiness), *Gartranama Gaurava* (feeling the heaviness of the body). The *Dushta Rakta Lakshana*¹⁵ (signs of impure blood) is *Vedana* (pain), *Paka* (inflammation), *Rakta Mandalata* (redness), *Kandu* (itching), *Daha* (burning sensation), *Sotha* (swelling) and *Pidika* (eruptions on the skin).

Types of Raktamokshana *Raktamokshana* is classified into two types:

1. **Shastra Visravana**¹⁶: It is the procedure that is performed by employing the use of sharp instruments. It is of two types:
 - a. *Pracchana* (scraping or scarification)
 - b. *Siravyadhana* (venepuncture)
2. **Anushastra Visravana**: This procedure is indicated for more delicate individuals since the instruments employed are not metallic. It has three types:
 3. *Jalauka Avacharana* (leech therapy)
 4. *Shringa Avacharana* (horn application)
 5. *Alabu Avacharana* (bottle gourd application)
 6. *Ghati Yantra Avacharana* (cupping therapy)

Indications of Raktamokshana¹⁷:

- The five types of *Vidradhi* (abscesses) excluding *Sannipataja Vidradhi*

- *Kustha* (skin diseases)
- *Vayu Saruja Sotha Ekdesha* (pain and inflammation in a particular region due to Vata Dosha)
- *Karnapalliamaya* (diseases of ear lobes)
- *Shlipada* (filariasis)
- *Vishadushita Rakta* (case of poisoning)
- *Arbuda* (conditions of tissue enlargement)
- *Visarpa* (erysipelas)
- *Granthi* (cystic lesions)
- *Upsdansha* (sexually transmitted diseases)
- *Stanya Roga* (inflammatory conditions of the breast)
- *Vidarika* (localized inflammation of the armpit region)
- *Saushira* (dental caries)
- *Galashaluka* (inflammatory conditions of throat and neck region)
- *Krimidanta* (dental caries)
- *Dantaveshtaka* (inflammatory conditions of the gums)
- *Upkusha* (tooth sensitivity)
- *Dantapuppata* (cystic lesions in gums)
- *Pittaja, Raktaja* and *Kaphaja Osth Roga* (various inflammatory conditions of lips)
- *Kshudra Roga* (various types of localized inflammatory conditions)

Contraindications of Raktamokshana¹⁸:

- *Sarvanga Sotha* (generalized edema)
- *Ksheema Cha Amla Bhojana Nimitta* (those emaciated due to intake of sour foods)
- *Panduroga* (anaemia)
- *Arsha Roga* (haemorrhoids)
- *Udaroga* (inflammatory conditions of abdominal organs)
- *Shosharoga* (tuberculosis)
- *Garbhini* (pregnancy)
- *Swathu* (inflammatory disorders)
- *Mada* (delirium)
- *Murcha* (unconsciousness)
- *Kshrama Artanama* (increased exertion)
- *Vata Vina Mutra Sangi* (withholding flatus, faeces and urine)

- *Nidraabhibhota* (sleepiness)
- *Bheeta* (fearful individuals)

The Procedure of Raktamokshana can be Divided into Three Stages: -*Purva Karma*, -*Pradhaan Karma*, -*Paschat Karma*

***Purva Karma*¹⁹**

The patient should initially be screened according to those who are indicated and contraindicated for the procedure beforehand. Once the patient is selected, he should be administered *Snehana* and *Swedana Karma* as well as he should be advised to take a diet consisting of liquid or gruel but counteracting the *Dosha* causing the disease. A suitable time should be selected for the process and the patient should be asked to sit or stand in a position that does not interfere with any vital life functions. The part of the body where the procedure is to be conducted should be properly positioned and tied with a cloth, leather band, inner bark of trees or creeper without endangering the body part or the life of the patient, it should neither be too tight nor too loose. After this, the part is palpated to find the particular vein on the patient's body where the *Pradhana Karma* is going to be performed.

Pradhana Karma

The *Pradhana Karma* for the various types of *Raktamokshana* are mentioned as follows:

***Pracchana*²⁰**

- In this process of bloodletting by scarification, multiple small non-deep wounds are made in a small area. The wounds should be straight, fine and evenly made and not too close to each other.
- The wounds made should avoid any *Marma* (vital areas), *Sira* (vessels), *Snayu* (nerves) and *Sandhi* (joints).
- The wound produced should be straight, sufficiently precise, proportionate at the intended site.
- After *Pracchana* is done, the local area is properly cleaned and dressed under aseptic condition.

***Siravyadhana*²¹**

The *Sira* should be made prominent by repeatedly tapping on the vein or by flicking the finger against the vein. When it becomes prominent enough it can be felt. Afterwards, the middle part of the vein should be marked and punctured using a *Kutharika* (scalpel).

The hands of the person conducting the procedure should be stable and should be aided with *Vrihimukha Sashtra*.

In very muscular areas, the puncture should be made comparable to the size of a *Yava* (barley grain) and in other areas, it should be half *Yava*, aided by *Vrihimukha Sashtra*. Veins that are located close to bony structures should be punctured to the size of half *Yava* aided by using a *Kutharika Shastra*.

The appropriate time of day that should be selected for performing *Siravyadhana* in the rainy season is on non-rainy and non-cloudy days, in summertime *Siravyadhana* is administered wither in the morning period or late noon when the temperature is relatively low and in wintertime, *Siravyadhana* is performed at noon when the temperature is moderate.

***Jalauka Avacharana*²²**

This procedure is commonly known as ‘Leech Therapy’, as the name suggests, the treatment involves applying medicinal leeches to the affected site on the body. The site selected should be pricked. The leeches to be used should be sprinkled with water infused with turmeric or buttermilk, then kept in a container filled with *Haridra* infused water until they attain full enthusiasm. Afterwards, they are held with gauze or cotton and applied to the site, once favourable, they will bite the skin, get attached and begin sucking. If the leech doesn’t begin sucking at the selected site, a drop of ghee or butter should be applied. The sign of proper attachment and sucking is that the neck of the leech will appear horseshoe-like in a raised, arch-like position, and peristaltic movement will be seen on the body of the leech. When this begins, the leech should be gently covered with a moist cotton or gauze piece.

The leech begins sucking impure blood similar to how the swan can drink milk only from a mixture of water and milk. When there is itching or any pricking sensation at the site, it indicates that the leech has begun to suck pure blood and the procedure is complete, the leech should be removed. Usually, at this stage, the leech detaches by itself, but if this doesn’t occur, turmeric or *Saindhava Lavana* may be sprinkled near its mouth, for it to detach.

After the procedure, the leech should be made to vomit out the ingested blood. This is done by holding the leech from the tail, then using the index and forefinger squeezed gently in a smooth motion going from the tail end to the head end. This will expel out all ingested blood. If this is not done, the leech can develop an incurable disease known as *Indramada*.

Shringa Avacharana

In this procedure, a cow’s horn that has been hollowed out is used. *Shringa* is *Ushna*, *Madhura* and *Snigdha* in properties hence it is used in *Vatika* disorders. At the selected site, a small incision is made with a surgical blade, then the *Shringa* with the wide mouth is applied at the site, and a suction is created from the other tapered end. The wide mouth surface should be uniform to ensure a proper seal is formed between the skin and the *Shringa*. The suction or vacuum created causes an upward movement of the accumulated blood to the surface of the skin. When the required amount of blood is withdrawn, the *Shringa* is removed, and the site is cleaned and properly dressed.

Alabu Avacharana

In this procedure, an *Alabu* or ‘Bottle Gourd’ is employed. The bottle gourd is a type of vegetable like pumpkin, a small hole is made at one end and the insides are removed, then it is allowed to dry in the hot sun.

For the procedure, when the *Alabu* is ready, a small incision is made on the skin. Afterwards, a small leaf or paper is placed at the side of the incision. A short lighted candle is then placed on the leaf, then the *Alabu* is carefully placed, ensuring that the mouth covers the incision as well as the candle. When this is done, the candle can only continue lighting for a limited time as the oxygen supply inside the *Alabu* is limited, so it extinguishes. Using up the oxygen supply inside the *Alabu* creates a negative pressure and causes a suction, whereby blood is sucked up through the incision made.

Ghati Yantra Avacharana

In this procedure, *Ghati* or earthen pot is used for the removal of blood. The procedure and concept are almost the same as *Alabu Avacharana*, instead, an earthen pot is used instead of an *Alabu*. But in recent times, glass cups are now used. It is sometimes

referred to as fire cupping therapy. This is because, instead of using a candle to create the negative pressure inside the earthen pot or glass cup, it is smeared with a flammable liquid, then set on fire, and before the fire extinguishers, it is applied to the part where the incision was made previously. When the fire extinguishers, creates a negative pressure and draws the blood up into the earthen pot or glass cup.

Paschaat Karma²³

After completion of the *Pradhana Karma*, dressing is done after a gentle massage around the wound, using medicated oils. A sign of a successful *Raktamokshana* procedure is that the blood should stop flowing by itself. If the bleeding doesn't stop by itself then gentle pressure should be applied with cotton at the site, for a few minutes. If even after these measures, the bleeding fails to stop, either of the following may be done *Sandhana* (adhesion process), *Skandana* (cooling measures), *Pachana* (suppuration) or *Dahana* (cauterization). Bloodletting causes emaciation, a reduction in digestive power, and an exacerbation of *Vata Dosha*. To avoid these complications, the patient should be provided with a diet that is not too cold, easy to digest, demulcent, hematinic, and non-acidic. Anger, sexual intercourse, day sleep, excessive talking, and physical exertion should all be avoided until the patient regains strength or for one month.

Samyak Lakshana of Raktamokshana²⁴ (Signs of Properly Administered *Raktamokshana*)

The signs of properly administered *Raktamokshana* are *Raktam Swamekaavthisthyta* (blood flow ceases by itself), *Vedana Shanti* (pain subsides), *Laghava* (lightness), *Mana Prasada* (normal physiology is maintained) and *Vyadhi Vega Parikshaya* (intensity of the disease is reduced).

Asamyak Srava Lakshana (Signs of Improperly Administered *Raktamokshana*) Headache, blurred vision, emaciation, convulsions, burning sensation, hemiplegia, monoplegia, hiccough, dyspnoea, cough, anaemia, and death are among symptoms of *Asamyak Srava Lakshana*.

Atipravati Chikitsa (Treatment of excessive blood flow)

The four types of treatment available to stop excessive bleeding are:

- *Sandhana* – Use of astringents
- *Skandhan* – Use of cold temperatures
- *Pachana* – Use of corrosive agents
- *Dahana* – Cauterization of blood vessels

The medicinal drugs used are astringent and they aid in the coagulation of the blood. The use of cold treatments such as ice packs aid in constricting the blood vessels to reduce bleeding. The use of alkaline drugs also aids in the coagulation of the blood. And the use of cauterization burns the blood vessels to bring about a complete stop to the bleeding.

The Ideal Season for Performing Raktamokshana

- As a general rule of thumb, *Pitta Dosha* is aggravated in *Sharad Ritu* (autumn season). Since *Pitta Dosha* is aggravated, *Rakta* is also aggravated, hence in *Sharad Ritu Raktamokshana* is advised.
- *Acharya Sushruta* mentioned specifically that *Raktamokshana* should be performed in neither too cold nor too hot climate and neither the individual who is too hot nor properly heated.

DISCUSSION

Raktamoskahana is a type of *Panchakarma* treatment modality that is classified under the *Shodhana Chikitsa*. It is the process of bloodletting by removing the morbid *Rakta* from the body. *Acharya Sushruta* considered *Rakta* as the fourth *Dosha* of the body and ranked its importance high. In today's fast-paced society, the population is more susceptible to lifestyle disorders due to the intake of fast foods which contain no nutritious value. Apart from this, the stress caused by school and work causes late-night sleep patterns, insomnia, irregular dietary habits etc, all of which contribute to the blood being impure. As a result of impure blood, many diseases are likely to manifest. Thus, *Raktamokshana* is a great benefit in today's era to prevent the manifestation of these diseases mentioned above. Some of the *Raktamokshana* procedures have been briefly mentioned, as well as their indications and contraindications of them. The ancient *Acharyas* of

Ayurveda has mentioned these treatment protocols many thousand years ago. *Raktamokshana* operation should be done regularly to remove poisonous compounds from the blood, or else it can lead to life-threatening diseases. As a result, appropriate *Raktamokshana* not only cures ailments but also helps to avoid diseases and maintain people's health. *Raktamokshana* is regarded as one of Panchakarma's most significant operations. Diseases that cannot be eased by *Snehana*, *Swedana*, *Nasya*, *Kriyakalpa*, and other treatments can be properly managed through *Raktamokshana*. Since ancient times, *Raktamokshana* has been a common Ayurvedic para surgical procedure. A competent *Raktamokshana* technique can cure a variety of ailments. It also avoids a variety of skin disorders, blood-borne infections, oedema, lymph node enlargement, and other consequences. Because *Raktamokshana* can be performed in an emergency, care must be taken with the patient. Failure to do so can result in serious complications or even death.

CONCLUSION

Ayurveda aims to prevent and cure diseases and *Raktamokshana* is a safe and effective *Panchakarma* procedure that can be performed in various types of *Raktaja Pradoshaj Vyadhi* if properly administered. It can be used as both a preventative and curative therapy. *Pitta Dosha* and *Rakta* have a special relationship with each other therefore when one is vitiated so does the other. When the impurities of *Pitta Dosha* and *Rakta* are significantly increased to the point where *Shamana* medicine has no effect, *Shodhana* by *Raktamokshana* is the best treatment available in the *Panchakarma* arsenal. Almost all of the sites indicated for *Raktamokshana* by *Acharya Sushruta* can be adopted for the removal of impure blood from the body.

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Source of Support: Nil

Conflict of Interest: None Declared

How to cite this URL: Avvinish Narine & Gopesh Mangal: An In-Depth Review of Raktamokshana (Bloodletting) Therapy. International Ayurvedic Medical Journal {online} 2022 {cited February 2022} Available from: http://www.iamj.in/posts/images/upload/374_380.pdf