

## ANALYSIS OF THERAPEUTIC EFFECTS OF RAKTA MOKSHANA IN VARIOUS INFLAMMATORY CONDITIONS – AN ANALYTICAL STUDY

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Article Received on 06/02/2025

Article Revised on 26/02/2025

Article Published on 18/03/2025

### ABSTRACT

Raktamokshana, a therapeutic para-surgical practice in Ayurveda, focuses on eliminating vitiated blood from the body. Rakta dhatu is one of the major components in the body which is responsible for increase and decrease of various inflammatory conditions which are explained in ayurveda like vidhradi, shopha roga, arbuda, granthi, kshudra rogas etc. All these conditions are associated with development of inflammatory cascades in the body. These cascades are circulating in the body, hence rakta mokshana plays a major role in preventing, controlling and curing of the conditions. Once the vitiated rakta is removed through *prachchanna*, *siravyadha*, *shringa*, *jalaouka*, *alaabu*, *ghati*, the amount of concentrated dooshita rakta will get reduce and sroto shodhana will establish. Hence the reduction in the symptoms of the disease. As per modern science, by doing blood letting therapy correction of physiological effects and mechanisms of improving circulation, reducing inflammation, and modulating the immune system are leading to controlling the disease conditions.

**KEYWORDS:** *Raktamokshana, Para surgical, Rakta dhatu, inflammatory cascade, blood letting.*

### INTRODUCTION

Rakta mokshana is one among Panchakarma as well as a para surgical procedure in which the vitiated blood removed from body by siravyadha, Prachchanna karma, shringa, Alabu, ghati and jalouka.

*Raktamokshana* is done to remove deep-seated circulating toxins from the blood. It relieves stagnation and congestion in circulatory components. It improves circulation to a specific area, reduces inflammation and improves healing of a specific location along with the entire system in general.

There are of two types. Shastra krita Visravana<sup>[1]</sup> - Generally sharp instruments are used to carry out this process. It is further divided into two category-Pracchana which means letting the blood through several superficial incisions and Siravyadhana, which is also known as venepuncture.

Ashastra krita Visravana- The metallic instrument is not considered for carrying out this procedure. It is further divided into 4 categories:

1. Jalaoukavacharana<sup>[2]</sup>, which means applying leeches on a particular area. This is mainly done for Pitta Dosha disorder.
2. Alabu<sup>[3]</sup>, which means creating vacuum and extracting blood through the vacuum using a

vegetable, which may be bottle guard or Alabu. This is mainly done for treating the Kapha Dosha diseases.

3. Shrungavacharana<sup>[4]</sup>: which means applying the cow's horns. This is mainly used for treating the Vata disorder.
4. Ghati Yantra Avacharana<sup>[5]</sup>: 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; an earthen pot is used instead of an Alabu.

### Indications of Raktamokshana<sup>[6]</sup>

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) • Karnapaali amaya (diseases of ear lobes) • Shlipada (filariasis) • Vishadushita Rakta (case of poisoning) • Arbuda (conditions of tissue enlargement) • Visarpa (erysipelas) • Granthi (cystic lesions) • Upsdamsha (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) •

Upakusha (tooth sensitivity) • Dantapupputa (cystic lesions in gums) • Pittaja, Raktaja and Kaphaja Osth Roga (various inflammatory conditions of lips) • Kshudra Roga (various types of localized inflammatory conditions)

All these conditions are associated with development of inflammatory cascades in the body. This condition is a complex biochemical process triggered by infection, injury, or toxins. It involves immune cells, cytokines (signalling molecules) and biochemical pathways that regulate inflammation. This cascade event can lead to either acute resolution (healing) or chronic inflammation (disease progression). Here all mediators are circulating in the blood. Hence blood is one of the major components in the body which is responsible for increase and decrease of various inflammatory conditions. So blood letting therapy plays a major role to control and cure the conditions.

#### Probable mode of action

Raktamokshana is considered as Ardh chikitsa because Rakta pervades all over body, along with which carries vitiated Dosha, when sthanika as well as sarvadaihika doshas are removed through rakta mokshana. Hence the amount of concentrated vitiated doshaja rakta will get reduced and reduction in symptoms. By Raktamokshana, Srotoshodhana is achieved shuddha rakta comes in, hence reduction in disease status.

The mode of action of bloodletting therapy in modern science is primarily based on its physiological effects and mechanisms of improving circulation, reducing inflammation, and modulating the immune system. Here's how it works:

#### 1. Reduction in Blood Volume and Pressure

- Bloodletting decreases the total blood volume, which can reduce blood pressure and alleviate conditions caused by hypervolemia (excess blood volume) or vascular congestion.
- This mechanism is beneficial for conditions like hypertension, varicose veins, and acute inflammatory states.

#### 2. Detoxification (Removal of Metabolites)

- Bloodletting can help remove excess inflammatory mediators, toxins, and metabolic waste products from the bloodstream.
- This is particularly useful in cases of gout (to reduce uric acid), certain skin diseases, and inflammatory conditions.

#### 3. Immune Modulation

- The removal of inflammatory cytokines and immune complexes can help modulate the immune response, reducing autoimmune activity and chronic inflammation.

#### 4. Improved Microcirculation

- By reducing vascular congestion and enhancing

blood flow, bloodletting helps deliver oxygen and nutrients to tissues more effectively, promoting faster healing in conditions like chronic wounds and abscesses.

#### 5. Reduction of Iron Overload

- Therapeutic phlebotomy is a standard treatment for conditions like hemochromatosis, where excess iron can cause damage to organs. Bloodletting reduces iron levels, preventing oxidative damage.

#### 6. Analgesic and Anti-inflammatory Effects

- By removing inflammatory cells and mediators, bloodletting may reduce pain and inflammation in conditions like arthritis and headaches.

#### 7. Leech Therapy (Hirudotherapy) Mode of Action<sup>[7]</sup>

- Leech saliva contains bioactive compounds such as hirudin (an anticoagulant with diuretics, antibiotic action) and Eglin, antithrombin anti-inflammatory agents that improve blood flow, reduce clotting, and relieve pain. With other bioactive substances do normalization and improvement of capillary as well as collateral blood circulation, expressed anti-inflammatory effect, Immune stimulation and Immune-modulating effect and early wound healing effect.

#### CONCLUSION

Raktamokshana is one of the major purification therapies where the disease causing factor i.e. vitiated Doshas are expelled from the body in addition to relief from disease. Different modalities of Raktamokshana can do sthanika shodhana as well as sarvadaihika shodhana i.e., improvement of local blood supply, improvement of local metabolism, improvement of local metabolic waste drainage system, and by flushing out the inflammatory chemical mediators. Hence Raktamokshana plays a very important role in preventing, controlling and curing the various inflammatory conditions in day today clinical practices. The clinician who knows about all about the Raktamokshana, its utility and their methods of applications is successful in treating various types of inflammatory conditions.

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