

PROBABLE MODE OF ACTION OF SIRAVEDHA: ARDHACHIKITSA

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06 May 2021,Revised on 26 May 2021,
Accepted on 16 June 2021

DOI: 10.20959/wjpr20218-20367

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ABSTRACT

Purpose: *Raktmokshana* means letting of blood which is mainly indicated in certain disease state especially when there is *raktadusti* and also during physiological function. The first detailed rational, systematic description of *raktamokshana* for several illnesses is mentioned in *Ayurveda* surgery. *Acharya Susrut* has cited that the person who regularly undergoes bloodletting will not get affected by *sopha* (inflammation), *twak dosha* (Skin disorders), *visarpa* (erysipelas), *granthi* (Tumour) etc disorders. The main aim of this study is to take account of probable mode of action of *raktmokshana*.

Methods: A literary review is conducted using electronic database like Pubmed, Google scholar, different Physiology books etc with

Ayurveda classics like *Charaka Samhita*, *Susruta Samhita*, *Ashtang Sangrah* etc. **Result:** The attempt was done to evaluate the mode of action in treating pathologic conditions as well as in maintaining physiological functions. **Conclusion:** The study suggests that both the Ayurveda and modern science explains that blood letting triggers the immediate haemodilution process in the body and adaptive to take care of various systemic challenges of body.

KEYWORDS: *Raktmokshana*, *raktadusti*, *twak dosha*, haemodilution.

INTRODUCTION

Ayurveda has probably given the first detailed, rational, systematic description of *raktmokshana* for several diseases as a preventive and curative measure. It is also considered

as one among Shodhana (Purificatory) procedures. Raktmokshana means letting of blood which is mainly indicated in certain diseases which are having raktdusti as pathology and also during physiological function. Susruta, Father of Surgery, has given detailed information regarding blood letting by various methods in *Susrut samhita*.

To expel out the vitiated blood seven methods were given in Susrut samhita

1. Venesection (Sira vedhan)
2. Horn application (Sringa avacharana)
3. Gourd application (Alabu avacharana)
4. Leech application (Jalauka avacharana)
5. Scrapping (Prachana karma)
6. Cupping glass application (Ghati yantra avacharana)
7. Needle application (Suchi avacharana)

The main function of Rakta Dhatu is to provide life i.e. *Jeevan* to living beings. Any disturbance or fluctuation i.e. reduction or increases in its quantity/quality leads to various pathologies. Hence to relieve the patients from these pathologies *Raktmokshana* (Blood letting) is applied as a supreme method of treatment in our *Ayurvedic* classics. *Siravedha* (Venesection) is considered as half of the treatment of *Shalyatantra* itself. According to *Acharya Susrut*, *Raktmokshana* provides “*Ashu Vyadhya Shanti*” means gives immediate effects. *Acharya Susrut* has cited that the person who regularly undergoes bloodletting will not get affected by *Sopha*, *twak dosha*, *visarpa*, *granthi* etc disorders.

AIM AND OBJECTIVES

To evaluate the probable mode of action of siravedha in terms of Ayurveda and modern science.

Mode of action of raktmokshana

Ayurvedic concept

- Raktmokshana (Siravedha) procedure destroys the raktaja vikara from its roots. This procedure cleanse the blood of its vitiation and thus make the person become lusturous, indriya become clear or are able to recognize their objects in a balanced manner.
- Rakta cannot get vitiate eventually, it mainly depend upon other doshas first tridosha is affected then there is vitiation of rakta and by raktmokshana help to pacify tridoshas.

- Samsrita dosha –In this condition pitta should be treated first, due to asayaasrayitva bhava of rakta and pitta raktmokshana helps to pacify vitiated pitta.
- Rakataj vikara- Vitiation of rakta dhatu leads to many twak vikara (Skin diseases), raktmokshana helps in removing dushita rakta from skin (Twak) and twacha gets nourished with shudhha rakta which will subside all type of twak vikara.
- Raktamokshana relieves the sanga (Obstruction) of srotas which is the dusti prakara in various skin diseases.
- Pitta is the mala of rakta and by raktmokshana vitiated pitta is removed.
- Avarana chikitsa- Raktmokshana can help to remove the aavarana of pitta and kapha doshas giving way to anulom gati of vata that will cure vatika symptoms.

And there are also many other quotations by Acharya Susruta and other acharyas of Ayurveda that will define why Raktmokshana is Ardha Chikitsa in Shalya Tantra.

Modern concept of raktmokshana

The extraction of blood for the cure of many disorders was in practice since antiquity until the late 19th century. In good olden days, physicians believed that for treating hypertension, blood letting could be beneficial by reducing blood volume.

Hippocrates was also reported that blood letting was in practice in Greece during the fifth century B.C. It was used to treat many disorders.

Basic physiology

To understand the modern concept of Raktmokshana everybody should know about the modern concept of nourishment of cell and body fluid mechanism at cellular level.

The blood runs in capillary which is a tube of flattened squamous endothelial cells and between each cell there are small gap junctions which are used to transfer nutrients, protein, gases etc.

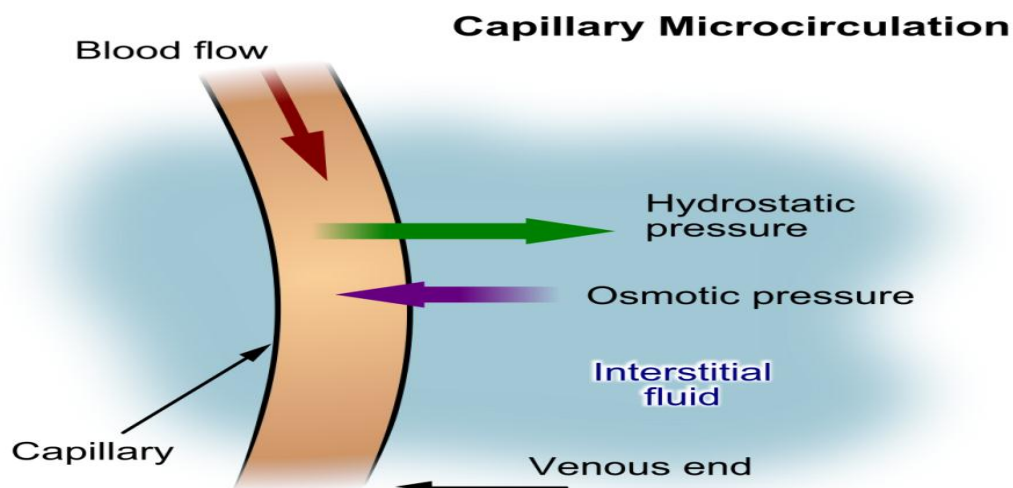


Fig. 1.

These capillaries are effusing the surrounded tissues for survival of body. The capillaries have plasma, which is made up of water molecules, large protein molecules mostly albumins. Blood is going to enter a capillary from an arteriole and drain into a venule. Arteries have higher blood pressure, so blood entering the arteriolar end have higher blood pressure i.e. 32mmHg and by the time it leaves the venule the blood pressure reduces to 12mmHg.

So, the hydrostatic pressure generated is more at arteriolar end than the venular end of capillary.

The capillary endothelial membrane is a semipermeable membrane due to small gap junctions present between the flattened squamous endothelial cells.

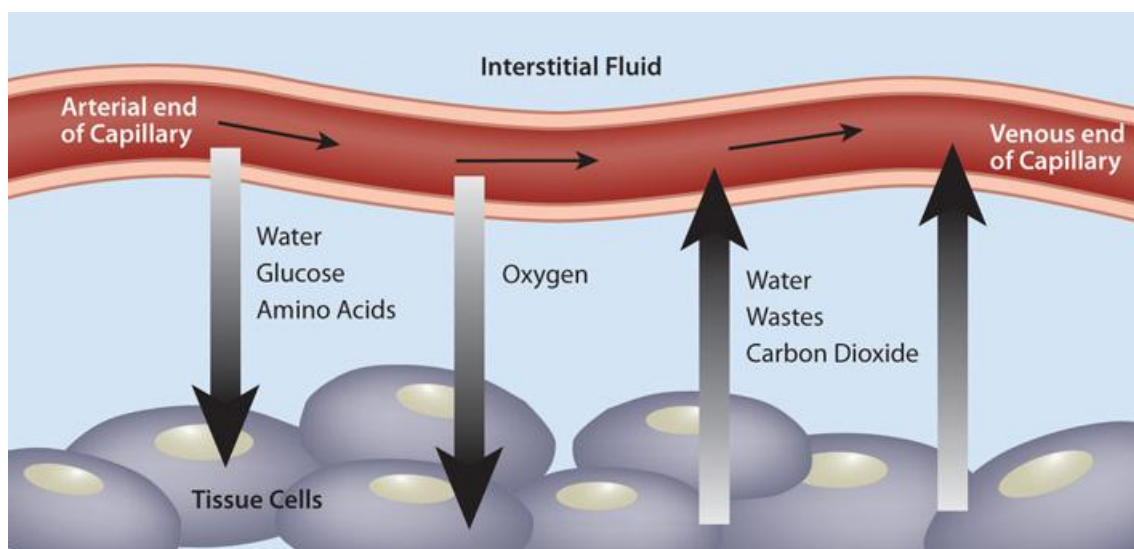


Fig. 2.

The water, nutrients, gases etc. from higher hydrostatic pressure get out through gap junctions and form the tissue fluid in the interstitial compartment. This happens because of pressure gradient that exerts between the interstitial compartment and the arteriolar end. The pressure in the interstitial compartment is lower than the hydrostatic pressure at the venular end.

The large plasma protein molecules generates an osmotic pressure i.e. about 25mmHg which is less than the hydrostatic pressure generated at the venular end. Therefore this means more osmotic pressure at the venular end helps in sucking back waste materials like fluid, gases etc from the extracellular space and obviously from interstitial spaces through the gap junctions.

Modern explanation of raktmokshana

As described in Ayurveda by Acharya Susrut Raktmokshana is done in Sira i.e. vein. Now after understanding the modern physiology of transport of fluid at cellular level. We made a conclusion that the fluid, nutrients, gases etc are absorbed from arteriolar end of capillary and reabsorbed back the metabolic waste products at the venular end.

Now if a patient suffering from Raktaj roga, vatavyadhi or any types of inflammation, musculoskeletal disorders the body tries to expel out the body toxins. Raktmokshana effectively increase the process of removing toxins at the cellular level and give instant relief to the patient.

In Raktmokshan, only venous blood is involved, doesn't matter by which method Raktmokshana is done. Acharya susrut describes various sites of veins for different diseases. This means veins near the pathology are more helpful in giving better results of raktmokshana.

CONCLUSION

Raktmokshana by Siravedha is termed *Ardhchikitsa* by Acharya Susrut because it gives relief in various types of disorders and also provides instant relief to the patient. The above provided physiology and correlation of Siravedha in Modern aspect can give self explanatory process at the cellular level, that how Siravedha breaks pathophysiology of diseases at tissue level and provides instant relief to patient. Siravedha therapy is for various disorders like Gridhrsi (Sciatica), Avbahuka (Frozen shoulder), Shlipad (Filariasis), Pravahika (Dysentery), Galagand (Goiter), Timir (Cataract), Apasmar (Epilepsy), Viswachi (Cervical spondylosis), Updansha (Syphilis), Chippa (Onychia purulenta) etc and many more disorders are given in

Samhitas that are treated by Siravedha. That's why Siravedha is termed Ardhchikitsa since centuries.

This can be an approach toward understanding how siravedha works and also there is a wide scope in the field of research in siravedha like

- How to select vein for siravedha
- How it provides relief in Mental disorders like Unmada, Apasmara etc
- How it provides relief in Skin disorders
- How much blood should be let out for different disease or is it same quantity for every disorder.
- How siravedha helps in reducing body temperature during fever.
- How siravedha gives relief in various Vatavyadhi like Akshepaka, pakshaghat , gridhrsi etc
- Why snehana and swedana is necessary before doing siravedha.

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