



Review Article

AN INTRODUCTION TO AYURVEDIC METHODS OF BLOODLETTING

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ABSTRACT

Ayurveda aims to prevent and cure diseases. In Ayurvedic system of medicine, bloodletting procedure is a kind of para-surgery practiced for the treatment of specifically blood borne diseases along with other surgical diseases. Therapeutic bloodletting is indicated in abscess, cellulitis, chronic ulcers resulting from snake bite, filariasis, genital infections, gout, herpes, inflammatory conditions, Skin disorders, tumors, ulcers, etc. While mentioning the five methods of body detoxification, the Ayurvedic texts mentions bloodletting as one among them, so it is one of the important therapies in *Panchakarma*. Bloodletting is also known as Phlebotomy and considered to be a prime treatment modality among the surgical procedures in Ayurveda. With curative aspects it also acts in preventive and promotive aspects. The vitiated impure blood is removed out from the body by the seven procedures - Venesection (*Siravyadhana*), scrapping (*Pracchanna karma*), horn application (*Sringa avacharana*), gourd application (*Alabu avacharana*), leech application (*Jalauka avacharana*), application of cupping pot/glass (*Ghatiyatra avacharana*), and needle application (*Suchivyadhana*). Bloodletting is also used to lower the iron levels and prevents its accumulation in various organs. Therapeutic bleed is a holistic treatment for impure blood and it helps to bring the body back into its natural and homoeostatic state.

INTRODUCTION

Bloodletting is a term employed to a Para surgical procedure that expels out the vitiated blood from selected areas of the body, by specific methods. The practice of bloodletting began around 3000 years ago with the Egyptians, then continue with the Greeks, the Romans, the Arabs and Asians.^[1] The process of bloodletting in India can be traced back to Vedic period. In the *Koushika sutra* of *Atharvaveda*, reference of leech application is available^[2]. Bloodletting has a rich history in Indian medicines i.e., Ayurveda, Siddha and Sowaigpa. The instruments that the physician commonly used for bloodletting are flames - which looks like Swiss knives, producing several kinds of blades, spring lancets with a single thin blade, cups that the physician could place over the incision to collect the blood, needle, leeches which is still in used for therapeutic reasons today.

Bloodletting is popular, when doctors use it not just to treat diseases but also to prevent it. It is used as a treatment for fever, hypertension, inflammation of the lungs and pulmonary edema. Bloodletting in Ayurveda is known as '*Raktamokshana*'. Acharya Sushruta mentioned *Raktamokshana* as one of the *Panchakarma* therapies. Synonyms of *Raktamokshana* are *Asravishruti*, *Raktaniravana*, *Shonitamokshana*, *Shonitavishravana*, *Raktaniharana*, *Raktasravana*, *Raktaharana*, *Siramoksha*, *Rudhirasravana*, *Raktavasechana* etc.^[3]

Importance of Bloodletting in Ayurveda

Bloodletting is considered to be the supreme therapy, as it drains out the vitiated blood and cures the diseases completely from the body. It not only purifies the channels of the body but also helps in making a person physically strong and free from the diseases. Its action is faster in treating all types of skin diseases^[4]. The person who undergoes bloodletting in an appropriate manner and at a proper time, regularly will never be affected with skin diseases, cystic swelling, Edema and other blood vitiation related diseases^[5]. In Ayurvedic toxicology, bloodletting is also used as an emergency treatment. Vein puncture, a method of bloodletting is considered as the half treatment in *Shalyatantra* (Ayurvedic Surgery)^[6].

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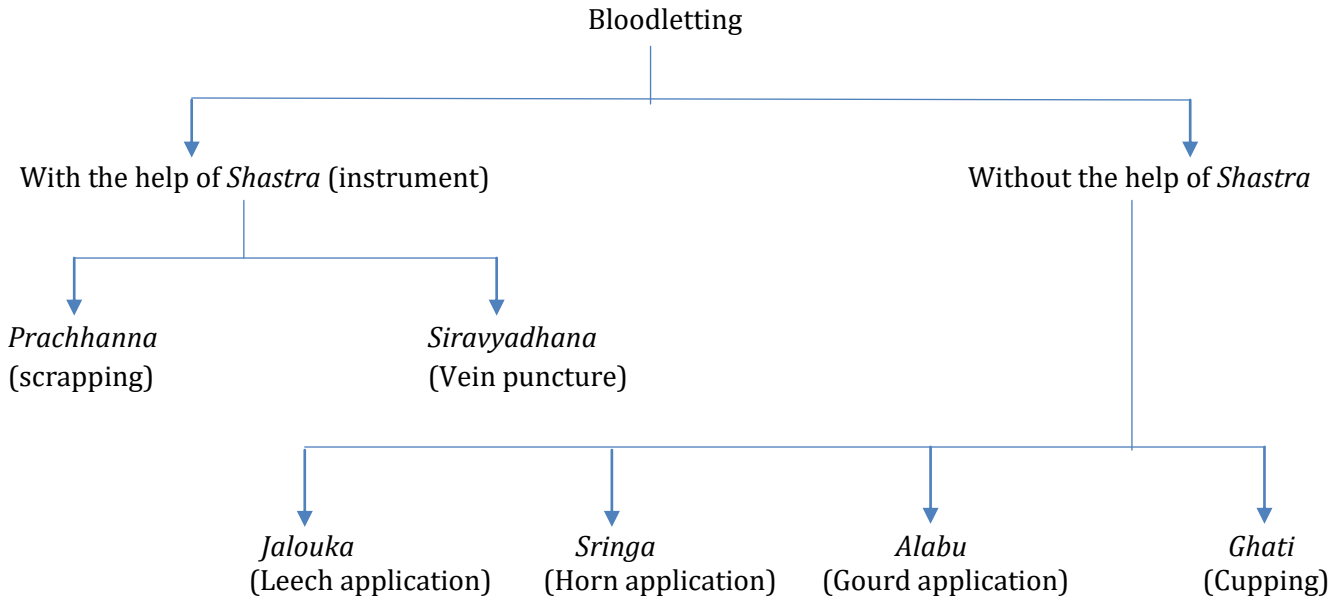
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Different Methods of Bloodletting



Suitable time for Bloodletting

The best suitable time for bloodletting is *Sharad ritu* (autumn season). Preferably, in the day time (neither too hot nor too cold). In winter, it can be done in the morning or in the evening while in summer season, it can be done in the cold time of a day. During Monsoon, it can be done when the sky is cloud free, while in pre-winter, it can be done in mid of the day. But in case of emergency, it can be carried out anytime as per the condition of the patient.^[7,8] Prior to bloodletting, a sudation therapy is to be done and *Yavagu* (medicated gruel) is given in adequate amount to eat^[9]. The suitable age for bloodletting ranges from 16 years to 70 years. But, the leech therapy can be practiced from pediatrics to geriatrics.

Indications for Bloodletting^[10]

Inflammatory swelling, wound, abscess, burning sensation, rashes, gout, skin diseases, elephantiasis, toxic conditions of blood, fibroid, tumor, mastitis, debility, heaviness of body, conjunctivitis, sinusitis, herpes, liver abscess, spleen abscess, obviate suppuration, burning sensation in ears, nose, lips, oral cavity, headache, gonorrhoea, breast diseases, dental carries, psoriasis, eczema, cancer, boils, ulcerative lesions, peripheral vascular diseases, venous diseases, arterial diseases, capillaries diseases, varicose vein, deep vein thrombosis, venous malformation, thrombophlebitis, burger disease, Reynaud’s disease, thrombosis, Ischemia gangrene, heart diseases, rheumatic diseases, arthritis, diseases of eye, mouth and head.

- Specifically leech therapy is also indicated in eye diseases, joint pain, hemorrhoids.^[11]
- Bloodletting is one of the first aid measure in poisonous snake bite^[12].

- The person not afflicted with excess cold, hot, excess of sweating and exposure to sun are fit for bloodletting.

Contraindications for Bloodletting¹³

Anasarca, emaciated person, pregnancy, suffering with anemia, hemorrhoids, ascites, consumption, dropsy. The person having bleeding disorders must be assessed before therapy. Immuno compromised patient as well as the patients taking medicines like the large dose of vitamin E, aspirin, heparin, warfarin, NSAID, garlic, ginger, ginkgo, biloba etc. Also, if the patient is not willing / interested for the therapy.

Table 1: Showing Different methods of Bloodletting

S. No.	Different Methods of Bloodletting
1.	<i>Prachana</i> (Scraping)
2.	<i>Siravyadhana</i> (Vein puncture)
3.	<i>Jaloukavacharana</i> (Leech therapy)
4.	<i>Shringa avcharana</i> (horn application)
5.	<i>Alabu avacharana</i> (Gourd application)
6.	<i>Ghatyantra avacharana</i> (Cupping therapy)
7.	<i>Suchi vyadhana</i> (Application of needles)

Prachhana^[14] (Scrapping): *Prachhana* also known as scrapping is a procedure by which the accumulated or clotted blood is removed with the help of lancet. Usually the pricks are made from bottom to upward direction which are parallel to each other. The pricking should not be too superficial or too deep. Pricking over a prick is avoided. If excessive bleeding occurs – *Ushiradi Churna* or *Triphaladi Kashaya* can applied and light bandage is done.

Siravyadhana (Vein puncture): The procedure of puncturing vein for therapeutic purpose is called Vein puncture. It is a main and most important method of bloodletting. In this method, up to 750ml (1 *Prastha*)^[15] of blood can be taken out from the patient's body. The patient is made to lie down or sit in a comfortable position. The part chosen for the vein puncture should be tied with a tourniquet. With the help of needle/scalp vein no. 18 to 22, the vein is duly opened or punctured. The blood is allowed to flow onto a measuring glass. Nowadays, needle with IV set are used. Usually, the bleeding stops by itself but, if the bleeding does not stop by itself, a pressure is applied with cotton for 2 to 3 minutes. In postoperative care, paste of turmeric powder mixed with honey is applied.



Figure 1: Showing Bloodletting through Vein puncture

Shringa avacharana^[16] (Horn application): In this procedure, horn of cow, buffalo, deer is used. The horn should be round in shape and hollow from the middle with seven inches in length and the base of the horn should be *Angushtha pramana* (thumb) and its top (other end) should be *Mudga pramana* (green gram). A local incision is made on the site of the bloodletting. The broad base of the horn is covered with a thin cotton piece of cloth and the base is fixed over the area covering the incision. The physician sucks the narrow end of the horn to facilitate the bleeding. After the desired amount of bloodletting, a dressing is done.

Alabu avacharana^[17] (Gourd application): Preferably a longer size of pitcher gourd is used. The pulp should be removed cutting the narrow end. A lamp or source fire is provided before the application of *Alabu*. The cut end of gourd is fixed to the skin in such a way that the inner portion of the gourd remains air tight. After few minutes the inner oxygen burns and a negative pressure created inside facilitating bleeding. After 10 to 15 minutes the gourd is removed, cleaned and dressing is done. Similar way *Tumbi* (pumpkin) is also used for bloodletting.

Ghatiyantara^[18] (Cupping therapy) - Bloodletting done by the application of glass / small earthen pot is known as *Ghatiyantara avacharana* (cupping therapy). On the selected area - 3 to 4 pricks are made with the help of sterile needle that leads to a pin point bleeding. The *Ghati yantra* is wiped from inside with spirit gauge and heated with match stick which was then quickly placed on the bleeding points. As, it was flamed inside, it creates a vacuum because of the consumption of oxygen by the flame which raises the local area to form a bulge and blood oozes out. Same position is maintained till the flow of blood stops and the blood gets clot, after which the *Ghati yantra* is removed and the area is cleaned with a piece of gauge.



Figure 2: Showing Bloodletting through Cupping Jaloukavacharana^[19] (Leech therapy):

Leeching is a popular method of bloodletting and widely practiced throughout the world in almost every system of medicine. Many varieties of leeches are available, only non-poisonous medicinal leeches are collected from leech farms. The effected part of the patient is cleaned with lukewarm water. Freshly collected leeches are taken and put into a tray with turmeric and mustard powder. By this process, the leeches become clean and pure. This is done up to 10 minutes, then the leeches become active. Then leeches are transferred to a Kidney tray of clean water. Around one to three leeches are applied to the site of maximum tenderness and the leeches are covered with wet cotton gauze. In the blood sucking process by the leech, water is sprinkled over the gauze piece time to time. Once the bloodletting is done, the leech gets detached from the site. The used leeches are put made to vomit blood with the help of turmeric powder. The wound site is applied with the paste of honey and turmeric powder. After the leeches vomit blood completely, they are transferred to a glass bottle with water.



Figure 3: Showing Bloodletting through Leech therapy

Suchiviyadhana (Needle puncture): This is a unique technique of bloodletting. References are found in Tibetan and Traditional Bhutanese medicine of the use of Golden needles.^[20] Presently for the collection of medial collateral ligament tightness in the Varus knee. According to the site of puncture different gauze of needles are used. In Charak Samhita, the same is indicated for treating gouty arthritis^[21].

Mode of action of Bloodletting^[22]

Depending on the conditions, bloodletting can be administered once in a week. If there is no proper bloodletting, on the first day then one more time also the procedure can be done. Bloodletting can reduce the workload on liver and spleen and stimulates it to perform their normal function. This procedure removes the old and damaged blood cells which helps in the formation of new blood cells and can reduce the viscosity of blood which prevents the thrombus formation, so useful DVT, thromboembolism and polycythemia. By performing bloodletting, the volume of blood also reduces thus the pressure and workload on heart also reduces. As per Ayurvedic concept, *Rakta* (blood) is the seat of *Pitta* (bile humor), so the *Pitta* gets detoxified. Liver and spleen is the root of *Raktavahasrota*, so there is purification in the blood channels. Similarly by applying leech, the blood is sucked at superficial level which might be from capillaries or extra cellular so, it may be more impure than other body channels. Thus, leeches can easily suck impure blood due to superficial distribution of veins.

CONCLUSION

A competent bloodletting technique can cure a variety of ailments and is also an essential part of the treatment of various diseases, related to blood and iron overload. It is quite safe and cost effective blood purification therapy and it works in both ways - curative as well as preventive way. The leeches and sharp instruments used for bloodletting should be sterilized according to the scientific standards in order

to prevent infection. Although, bloodletting was practiced in ancient India but with advanced research, it will improve health care at a much faster pace.

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