Role of leech therapy in surgical diseases

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Abstract

Since ancient times Leeches were used to treat many diseases through bloodletting. According to Ayurveda Leech therapy is para surgical treatment modality. It is also called as bloodletting therapy. The description about leech therapy found in Sushrut Samhita. Sushruta has described the nature of leeches, their habit and method of application. Leeches secrete more than 20 identified bioactive substances such as Antistasin, Eglins, Eumerin, Hirudinetc. These enzymes have Analgesic, Anti-inflammatory as well as Antimicrobial effect. An enzyme has the ability to stay in the blood and do vasodilatation and further facilitate the blood supply to the surrounding tissue and helps to promote healing. Leeches were the primitive tool of surgical procedures since ages and the importance of leeches has not been diminished in modern era also and hence it can be used as conservative treatment in surgical diseases like Thrombosed haemorrhoids, Cellulitis and abscess and surgical intervention can be avoided.

Key words:
Leech therapy, Bloodletting, Thrombosed Haemorrhoids.

Introduction:

Ayurveda is an ancient medical tradition from India and since ancient times, Leeches were used to treat many diseases. Sushruta has considered that blood vitiated by Vata, Pitta and Kapha should be removed from the body, by using Srunga, Jalauka and Alabu respectively [1]. Method of letting blood from body using Jalauka is considered as the most easy and convenient [2]. According to Ayurveda leech therapy is
parasurgical treatment modality. Sushruta has also described that it is best suited to elder, children, old aged, frightful, debilitated, women and persons of tender constitution. Due to its therapeutic effects, this is successful even today.

**Discussion:**

The medicinal effect of leeches has been used for millennia throughout the world. Today the effects of leech therapy are supported by scientific research that the active components in leech saliva, the best known being hirudin, 14 other active ingredients in the saliva exert anaesthetic, anti-inflammatory, vasodilatation and antibiotic effects.[7] The combination of extraction of stagnant blood combined with the bioactive saliva produces a profound long lasting effect on diseased areas.

Leeches live in fresh water and are segmented, hermaphrodite, carnivorous worms. They are sensitive to vibrations on water, touch, light, heat, sound and various chemicals. They are multi-segmented, including “brain parts” and each segment has different organs such as ganglions and testicles. Two sucker parts work for creeping and adherence; the anterior one has three jaws including many teeth. They generally bite warm parts of host and suck its blood with rhythmic contractions.[3, 4].

Leech therapy is an effective treatment for such conditions as Thrombosed haemorrhoids, Cellulitis, Varicose veins.

**Leech therapy for Hemorrhoids:**

Acharya Sushruta father of surgery has considered Arsha (haemorrhoids) in Ashtomahagada. The incidence of haemorrhoids is common among all economical classes of population though the disease is within the limits of management; it has its own complications like inflammation, strangulation and thrombosis. Sushruta has indicated Visravana or Raktamokshna karma in management of haemorrhoids.[5] It has been explained that in prolapsed and thrombosed piles Raktamokshna is the choice of treatment which relives pain.

Raktamokshna can be carried out with help of Jaluka (leech) or any other suitable method. The importance of leech therapy has not been diminished in present era, and hence it can be used as a conservative treatment in the management of haemorrhoids.

**Leech therapy for cellulitis:**

Cellulitis is a spreading type of inflammation of subcutaneous tissue. It is very painful condition. Cellulitis characterized by pain, redness, tenderness, local temperature and fever with chills. If ignored, it may switch over to an ulcer.
This condition is more or less similar to Vranashopha. Ayurveda in terms of symptoms or pathogenesis, bloodletting is prime remedy to manage Vranashopha\(^6\), hence it can be useful to regress such conditions. It is very useful to manage inflammation in any condition.

**Leech therapy for varicose veins:**

Varicose vein is a disease in which veins are dilated, tortuous, elongated, swollen, seen bulging and protruding over the surface of skin. Varicose veins are different in colours from person to person. It may be blue red, greenish blue etc. Majority of varicose veins are seen mostly on thigh and back of calf muscle and in lesser extent posterior on inner side of legs. The primary causes of varicose veins are the incompetency of the valves and the weakness in walls of veins. When it becomes chronic it causes venous insufficiency, preventing the blood flow back to the heart. In Ayurveda disease is correlated with *Suirajagranthi*. Hence leech therapy can be used as line of treatment in varicose veins to avoid complications like pain, bleeding, formation of blood clots etc.

**Conclusion:**

According to Sushruta *Siravedha* is a half treatment in Shalyatantra a type of *Raktamokshana*\(^7\). *Siravedha* is a *Shastrakruta* type of *Raktamokshana*. Patient hesitates for this type of *Raktamokshana* due to fear of blood loss. Hence Leech therapy is cheap effective method which easy to apply. It’s mode of action have been elucidated for various diseases. It is based on sound scientific principles and has resulted in important patient care enhancements. Leech therapy is most often used in the settings of localised venous congestion associated with flap reconstructions and surgical re plantation. It has been also used to treat soft tissue swelling. It is not an alternative, but is a complementary or integrative choice of treatment.

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