

# Case Study Of Leech Application In Varicose Ulcer

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**Abstract:** Varicose ulcers are wounds that are thought to occur due to improper functioning of venous valves, usually of the legs. They are the major occurrence of chronic wounds, occurring in 70% to 90% of leg ulcer cases. In Sushrut Samhita, where get the most scientific description of wound and its management. Similarly, Sushrut has given the almost importance to Bloodletting therapy and considered leech as the most unique and effective method of bloodletting even in infected wounds and abscesses. Aforesaid description let us to try leech therapy in venous ulcer was advised to continue weekly application of leech around the ulcer which was followed by dressing with Seethodaka oil and Dashanga lepa. This leech therapy proved very effective and the ulcer healed completely within 30 days. However further evaluation is required to be done by taking a large samples size to prove its significant in treating Venous ulcer.

**Index Terms:** Venous Ulcer, Jalawka, Leech Therapy

## 1 INTRODUCTION

### About Varicose ulcers:

Occur due to increased venous hydrostatic pressure. Generally manifests on the medial side of lower one third of the leg, (Long saphenous varicosity) and also occasionally on the lateral aspect of lower leg region (short saphenous varicosity). It is generally shallow and superficial, edge is sloping, Never penetrates deep fascia, floor is covered by pale granulation. Usually painless, unless effected by secondary infections or penetrates deep causing peridontitis tibia. Shows features of healing. Generally associated with varicosity of vein. The neighboring area of the ulcer is hyper pigmented (owing to stasis of blood), indurated and tender. Women are effected more often. Occurs secondary to may years of venous disease. Discomfort, pigmentation, eczema and tenderness of skin exists for months/years prior to ulceration.

### About Leech Therapy:

It is considered most unique and most effective method of bloodletting. It can be tried in all mankind including females, children, old and patients having poor threshold to pain. It drains impure blood useful in Pitta dushit Rakta diseases, various skin disorders and all types of inflammatory conditions.

### References of indication of Leech Therapy in wounds:

In Sushrut Samhita Chikitsa Sthan, chapter 12 and 16, Sushrut has advocated that bloodletting by means of Leech can be practiced in all inflammatory, suppurative and painful conditions to relieve pain and inhibit suppuration including that of venous ulcerative lesions.

**Table 1: Components of medicinal leech (*Hirudo medicinalis*) saliva**

Hirudin	Inhibits blood coagulation by binding to thrombin
Calin	Inhibits blood coagulation by blocking the binding of von will brand factor to collagen, inhibits collagen mediated platelets aggregation
Destabilase	Monomerizing activity, Dissolve fibrin, Thrombolytic effects
Hirustatin	Inhibits Kallikrein, trypsin, chymotrypsin, neutrophilic cathepsin G
Hyaluronidase	Increase interstitial viscosity, Antibiotic
Tryptase inhibitor	Inhibits proteolytic enzymes of host mast cells
Eglins	Anti inflammatory, Inhibits the activity of alpha- chymotrypsin, chymase, subatilisin, elastase, cathepsin G
Factor Xa inhibitor	Inhibits the activity of coagulation factor X a by forming equimolar complexes
Complement inhibitors	May possibly replace natural complement inhibitors if they are deficient
Carboxypeptidase A inhibitors	Increase the inflow of blood at the bite side
Histamine like subatances	Vasodilator, Increase the inflow of blood at the bite side
Acetylcholine	Vaso dilators
Anesthetic substances	Anesthetic

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### Aim and objective of Case Study:

- To evaluate clinical efficacy of 'Leech Therapy' in the patient with varicose ulcer.
- Refining Clinical Technique (Leech Therapy)
- **Type of Study:** Observational Single Case Design without control group
- **Study Centre:** Gampaha Wickramarachchi Ayurveda Hospital, Yakkala
- **Study Details:** (C.R.F. Protocol in brief)
- **Name of the patient:** ABC
- **Registration No:** 1442
- **Date of Admission:** 2016-Jan-04