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### RESEARCH ARTICLE

## ROLE OF JALUAKA AVACHARANA AND HARIDRA POWDER AVACHURNANA IN DUSTA VRANA W.S.R. VENOUS ULCER.

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### Abstract

Venous ulcer is a severe clinical manifestation of chronic venous insufficiency. It is responsible for about 70% of chronic ulcers of the lower limbs. The pathogenesis starts with dysfunction of venous valves causing venous hypertension which stretches the veins resulting in ulcer formation. In Ayurvedic perspective, venous ulcers can be correlated with Siragata Vatajanya Vrana. Raktamokshana (Bloodletting) is one of the ancient and important para- surgical procedure described in Ayurveda for the treatment of various diseases. Of them, Jalaukavacharana or leech therapy has gained greater attention globally, because of its medicinal values. Haridra has excellent Raktaprasadaka (Blood purifier), Rakta Stambhak , Vranashodhaka And Vedana sthapaka properties have better effects in healing of the ulcer

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### Introduction:-

Varicose ulcers are wounds that are thought to occur due to improper functioning of valves in the veins, causing venous stasis usually in the legs. Varicose ulcers appear when these enlarged veins become congested with fluid build up and infection occurs. It is the major cause of chronic wounds, occurring in 70% to 90% of chronic wound cases<sup>1</sup>. They are also known as stasis ulcer or venous ulcers and are most commonly seen the female population.

The etiological factors include increased intravenous pressure, secondary to deep vein thrombosis, chronic constipation, long standing occupation etc. The pathogenesis starts with persistently increased intravenous pressure which damages the venous walls and results in stretching, loss of elasticity, hyper lipodermato-sclerosis and finally ulcer formation. Confirmation of diagnosis is done by Duplex Doppler ultrasound scanning of the lower limb venous System. interruption of reflux source technique (TIRS) by sclerotherapy, laser ablation of varicose veins or surgical correction of superficial venous reflux is performed<sup>2</sup>. If varicose ulcer is not treated properly or left untreated then, wound infection causing increased pain, swelling, redness and pus, loss of mobility and even severe complications like osteomyelitis, septicaemia or malignancy etc. may occur.

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**Pathology in delaying varicose ulcer healing:**

The pathogenesis of varicose ulcer starts with dysfunction of venous valves causing venous hypertension which stretches the veins. This allows blood proteins to leak into the extra vascular space. It isolates extra cellular matrix molecule and growth factor, preventing them from helping to heal the wound.

Similarly, leaking of fibrinogen and deficiency in fibrinolysis cause fibrin to build up around vessels preventing oxygen and nutrients from reaching cells. This also plugs the vessels causing ischemia around the wound resulting in delaying in wound Healing Further, the venous insufficiency causes leukocytes to accumulate in small vessels which releases inflammatory factors causes chronic wound formation There are so many factors responsible to make wound healing process delayed. They are dead tissues, insufficient blood supply, protein deficiency, the diseases like varicose veins, diabetes mellitus, tuberculosis etc. In case of delayed healing, it is more likely to be local than general, which clarifies the magnitude of the problem of study.

A clean wound in normal body heals earlier with mini-mum scar as compared to contaminated wound. There-fore, the prime importance is given to the local / topical applications to keep the ulcer clean & provide the optimal “moist” environment.

In the present context all efforts are directed to keep the wound clean during various stages of its healing.

To achieve good approximation, early healing and acceptable scar without complications Sushruta has explained 60 modalities of treatment. Among these 60 procedures, Avachurṇana and Raktamokṣaṇa is also mentioned.

**Ayurvedic View On Venous Ulcer**

Venous ulcer can be correlated with SiragataVatajanya vrana . The lakshanas of SiragataVata i.e. Pain in Sira, contraction & engorgement of Sira. Acharya Sushruta has exclusively mentioned the treatment regime for SiragataVatajanya vrana’ which includes local oleation and fomentation along with Leech therapy. Sushruta has advocated sixty procedures (Shashthi upakramas) for wound management which can be practiced as perstage of wound and necessity. He has given the most importance to Bloodletting therapy and considered Leech as the most unique, effective method of bloodletting even in infected wounds and in abscess management. Sushruta has also specified that the wounds over the lower limb delays in healing. Leech therapy is considered as most unique and 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 Dushitha Rakta diseases, various skin disorders and all types of inflammatory conditions. Acharya Sushruta has advocated that bloodletting by Leech can be practiced in all inflammatory, suppurative and painful conditions to relieve pain & inhibit suppuration including that of non healing ulcerative lesion<sup>3</sup>.

**Cuasative Factor Of Siragranthijanya Vrana (Venous Ulcer)**

1. Weak person who works hard or for a longer period for longer distance.
2. Weak person who walks for a longer time.
3. If he dips his leg in water (especially in cold water).
4. A person who does heavy exercise.

Due to various vata vitiating factors vata gets vitiated in the body and this vitiated vata dosha acquires sthansanshraya (ie.localization) in different parts of the body. Acharya Sushruta described that vitiated vata dosha gets accumulated either in one part or one dhatu by producing symptoms described above like Shotha (inflammation), shoola (painful) etc.<sup>4</sup>

**Clinical Features Of Siragranthijanya Vrana**

1. Sira Sankocha (tortous veins)
2. Sira Vakrata (irregular surface of veins)
3. Sira Utsedha (inflammation of veins)
4. Vishoshana (roughness and hardness of veins).

### Probable mechanism of action of leech therapy

Leech application corrects venous hypertension, reduces vascular congestion due to presence of Carboxypeptidase A inhibitors, Histamine like substances and Acetylcholine,<sup>5</sup> thus it venous valve dysfunction and extra vascular fluid perfusion. This prevents leakage of proteins and isolation of extra cellular matrix molecule and growth factors, thus helps to heal the wound. Leech application has peripheral vasodilator effect due to presence of vasodilator constituent in the saliva which improves blood circulation and corrects "ischemia" around the wound, thus promotes wound healing. 6 Leech applications has Anti-inflammatory action on nerves due to presence of substance like Bdelins and Eglins in the saliva which prevents leukocyte accumulation in the surrounding vessels, thus inhibits release of inflammatory factors which causes chronic wound formation.

### Referances of indication of leech therapy in wounds:

Leech therapy is considered as most unique and effective method of bloodletting. It can be tried in all mankind including Females, Children, Old and Patients having poor thresh hold to pain. It drains impure blood, useful in *Pitta dushit Rakta* diseases, various skin disorders and all types of inflammatory conditions. In *Sushruta samhita Chikitsasthana*, chapter 12 and 16, *Sushruta* has advocated that bloodletting by Leech can be practiced in all inflammatory, suppurative and painful conditions to relieve pain and inhibit suppuration including that of non healing ulcerative lesions.

### Importance of haridra powder avachurnana

*Haridra*(Curcuma longa) is *Katu*(pungent) and *Tikta*(bitter) in taste, *Ruksha*(dry) in property. It acts against *Kapha* and *Pitta dosha*<sup>7</sup>. It is helpful in improving immunity. Curcumin present in it is a potent anti-inflammatory agent. It protects the skin by increased collagen deposit, angiogenesis and improved wound healing. These drugs have *Tikta rasa* in common. *Tikta rasa* has *Vayu* and *Aakashmahabhuta*, *Kashaya rasa* is composed of *Vayu* and *Prithvi*, whereas in *Katu rasa* *Vayu* and *Agni* is present. So, according to *Panchbhautika* composition of these drugs, there is combination of *Vayu*, *Prithvi*, *Agni* and *Aakash*. *Vishadaguna* is comprised of these *Mahabhutas* and this *Vishadaguna* has property of *Kshalana*. Karma as explained by *Hemadri*. This *Kshalana* karma of these drugs is actually responsible for curing such ulcers The *Vishadaguna* provides clearness, provides transparent nature, *Kledaachoshana*(exploitation of metabolic wastes), *Mala shoshana*, *lekha* and *Vranaropana*. Due to *Tikta Rasa* of these drugs, *Shodana*, *Kleda-medo-vasa-Puya Upshoshana* occurs<sup>8</sup>. *KashayaRasa* of these drugs helps in *Shodhana*, *Lekhana*, *Kledaopshoshana*, and *Ropana* of the ulcer<sup>9</sup>. *Katu-rasa* has also properties of *kushtakanduupshamana*, *kaphakrimivishaupshamna*, *medsaamuphanta*.

### Conclusion:-

Contemporary leech therapy is most often used in these letting of localized venous congestion or hematoma .Venous congestion occurs with native venous thrombosis or with venous outflow thrombosis in avascular graft or replanted tissue. The goal of leech application is to avoid the need for surgical intervention. While modern use of leech therapy revolves around providing a temporary substitute/bridge for venous outflow in the setting of critical venous congestion of tissue reconstruction/flaps, one must always differentiate between venous congestion and arterial ischemia within the tissue being considered for hirudotherapy. This is because the use of leeches in tissue with compromised arterial inflow will not only fail to promote tissue healing but may also contribute to introducing bacterial contamination of the ischemic tissue. This leech therapy proves to be effective, timesaving, affordable and acceptable treatment. *Avachurnana* is dusting the medicine over the ulcer site uniform pattern easy absorption medicines and *Haridra* would enhance healing. *Haridra*(curcuma longa) has excellent *Raktaprasadaka*(Bloodpurifier)*Rakta-stambhaka*(Hemostatic), *Vedanasthapka* (Analgesic) properties.

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