



ISSN 2456-3110

Vol 9 · Issue 8

August 2024

Journal of
**Ayurveda and Integrated
Medical Sciences**

www.jaims.in

JAIMS

An International Journal for Researches in Ayurveda and Allied Sciences



Maharshi Charaka
Ayurveda

Indexed

A Case Study on *Dushta Vrana* w.s.r to Venous Ulcer

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ABSTRACT

Vrana in Ayurveda is defined as a structural deformity in the skin and deeper structures, it's of 2 types - *Dushtavrana* and *Shudhavrana*. *Dushta Vrana* with foul smell has abnormal color with profuse discharge from wound, intense pain and takes long period to heal is said to be *Dushta Vrana*. The features will vary according to the predominant *Dosha*. It can be correlated to Chronic wound based on underlying pathology. Chronic wounds are termed ulcers and can be defined as wounds with full thickness in depth and slow healing tendency. In this single case study *Dushta Vrana* is considered as venous ulcer is one among 4 types of Chronic wound. Venous Ulcer occurs due to abnormal hypertension in the lower third of the leg, ankle and dorsum of foot. *Acharya Sushruta* has mentioned *Shashti Upakrama* for the management of *Vrana*. Here to evaluate the combined effect of *Shodhana* and *Shamana Chikitsa*, Classical *Virechana*, *Jalaukaavacharana* as a *Shodhananga*, *Shamanaushadi* by *Kaishora Guggulu*, *Triphala Guggulu*, *Gandhaka Rasayana*, and *Manjishtadi Kashaya*, *Sthanika Chikitsa* by *Panchavalka Kashaya Pariseka* and *Jathyadi Ghrita*. The medicines having *Tridosha Shamaka*, *Vrana Shodhana*, *Ropana*, *Vedana Shamaka*, *Shothahara*, *Rasayana* property showed successful result in treating *Dushtavrana*.

Key words: *Dushtavrana*, Venous ulcer, *Kaishora Guggulu*, *Triphala Guggulu*, *Jathyadi Ghrita*.

INTRODUCTION

Vrana is derived from the verbal root '*Vrana Gatravichurnane*' which means splitting/tearing of the body tissues. Since it causes discontinuity of the *Dhatu* it is called *Vrana*. *Vrana* is so called as it covers the site and the scar even after healing does not disappear lifelong.

Vrana is concerned the main *Nidana* includes both *Nija* and *Aganthuja* factor. *Nija Vrana* is vitiation of *Doshas* due to faulty dietary habits, mode of living, seasonal variations and such deranged *Doshas* after going through

series of pathogenesis get lodged in particular site resulting in formation of *Vrana*. Thus, *Nija Vranas* are the ulcers formed after suppuration. *Acharya Charaka* has defined *Nija Vrana* as *Vrana* formed after derangement of *doshas* and discharge their contents outwards.^[1] *Agantuja Vrana* caused due to thermal injuries, Pressure injuries with blunt or Sharp instruments, Chemicals as strong acids, *Kshara*, poisons of vegetable and animal origin, supernatural factors (*Mantra*, *Shapa*), fall from trees, fight with stronger fellow, bite by animals, insects etc are other factors leading to *Agantuja Vrana*.^[2]

Vrana Ropana last point in any kind of surgery, it's equally important and true that without proper healing the art of surgery remains incomplete. *Acharya Sushruta* explained *Shanmoola*, *Asta Parigrahee*, *Pancha Lakshana Lakshita*; *Vrana*, *Srava*, *Gandha*, *Vedana*, *Aakruti* to diagnose the *Vrana* and also scientific explanation about *Shastiupakrama* (60 procedures)^[4] and many other formulations for *Vrana Shodhana* and *Ropana*. Etiology and pathogenesis of *Dushtavrana* as described by *Hareetha Samhita* and *Ashtanga Hridhaya* are contaminated food drinks, carrying of heavy load, severe exercise and emotional

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Submission Date: 09/07/2024 Accepted Date: 19/08/2024

Access this article online

Quick Response Code



Website: www.jaims.in

DOI: 10.21760/jaims.9.8.43

factors like anger, fear etc. Defective surgical procedure like *Mithya Bandha*, *Atisneha*, *Roukshya* are the cause for vitiation of *Raktha*.^[3] *Raktha Dhatu* associated with *Rasa Dhatu* in its path of perfusion causes the vitiation of other *Dhatu* i.e., *Mamsa* and *Meda* which leads to *Dushta Vrana*.

Table 1: Samprapti Ghatakas of Dushtavrana

SN	Samprapti Ghatakas of Dushtavrana	
1.	<i>Dosha</i>	<i>Tridosha</i>
2.	<i>Dushya</i> and <i>Adhithana</i>	<i>Twacha, Mamsa, Sira, Snayu, Sandhi, Asthi, Kostha</i> and <i>Marma</i>
3.	<i>Srotas</i>	<i>Annavaha, Rasavaha, Raktavaha, Mamsavaha, Swedavaha</i>
4.	<i>Agni</i>	<i>Manda, Vishama</i>
5.	<i>Marga</i>	<i>Antarmarga, Madhyamamarga, Bahyamarga</i>
6.	<i>Udbhavasthana</i>	Anywhere in the body
7.	<i>Pratamya Lakshana</i>	<i>Gatra Vichurna</i> along with <i>Pancha Lakshana</i> i.e., <i>Vedana, Akruithi, Gandha, Vrana</i> and <i>Srava</i>

Doshas being aggravated by their respective causative factors gets lodged in any of *Vrana Sthana* to give rise to *Dushta Vrana*.

Venous ulcer:

Spontaneous ulcer due to lipodermatosclerosis or following minor injury. Occur at the rate 3/1000 at age 61-70 and 20/1000 at >80 years, 2/3 of ulcer are due to chronic venous insufficiency and 1/3 due to arterial disease, diabetes, rheumatoid disease etc. Venous 40-50% of ulceration is due to superficial venous insufficiency alone. Usually, ulcer occurs in chronic venous disorders in the age group of 40-60 years. Women are affected more than men. Venous Ulcer occurs due to abnormal hypertension in the lower third of the leg, ankle and dorsum of foot. Varicose ulcer, Post thrombotic ulcer or Gravitational ulcer used as synonyms of it. The main pathway of the venous drainage of the ankle skin in the erect posture is via the ankle perforating veins. When the valves of this vein

are damaged there will be local venous hypertension. This condition is aggravated by obstructed main deep veins. Post canalization of the thrombosed deep vein leads to destruction of the valves of the veins and this becomes the main contributing cause for ankle venous hypertension. Location of the perforating veins from the malleolus up to the lower half of the leg determines the predilection of the area for the development of stasis changes and ulcers.^[5]

Venous leg ulcer (VLC) found in lower part of the leg on its medial side, majority vertically oval, can be any shape and size. The edge is sloping and pale purple blue in color. Margin is thin and blue of growing epithelium. The floor is formed by pale granulation tissue. The ulcer usually shallow, flat and never penetrates the deep fascia. The discharge is seropurulent with occasional trace of blood. The base fixed to the deeper structures. Surrounding skin in chronic venous hypertension shows pigmentation, induration and tenderness.^[6]

Treatment of Ulcer due to superficial venous insufficiency: varicose ulcers respond well to surgical treatment of varicose veins and ulcer heals with medical treatment but recurrence can't be avoided. Standard treatment of ulcer due to deep venous insufficiency- Debridement of ulcer, keeping it clean, foot end elevation, adequate compression; elastic stocking, multilayer bandage technique.^[5]

Case Study Parameters

Inclusion Criteria

1. Patients irrespective of age, sex, occupation, was selected for the study.
2. Patients having clinical features of *Nija/Agantuja Dushta Vrana* i.e., pain, foul smell, pus discharge, pain, burning sensation, edema was selected for study.
3. *Dushta Vrana* with maximum history of four weeks.

Exclusion Criteria

1. Patients suffering from systemic diseases like uncontrolled Diabetes mellitus, Tuberculosis etc. was excluded from the study.

2. Patients suffering from grave conditions like malignant ulcer and other severe illness like HIV, HbsAg was excluded
3. Patients having pre-gangrenous or gangrenous changes.
4. Patients suffering from Osteomyelitis

Assessment criteria

The assessment of the result is based on signs and symptoms presented before and after the completion of the treatment. Objective parameters as Size of ulcer, Discharge, Sloughing, Foul smell, Granulation, discoloration, edema and Subjective parameters as Pain, Burning sensation, Itching are used as assessment criteria. On the basis of degree of relief and condition of patient the clinical features of *Vrana* assessed in the form of scores as follows:

Table 2: Objective and Subjective Parameters

SN	Objective Parameters	Subjective Parameters
1.	Size of ulcer	Pain
2.	Discharge	Burning Sensation
3.	Sloughing	Itching
4.	Foul Smell	
5.	Granulation	
6.	Discoloration	
7.	Edema	

Table 3: Objective and Subjective Parameters Scale

Parameters	Nil - 0	Mild - 1	Moderate - 2	Severe - 3
Size of ulcer	Healed	Upto 4x4 cms	Upto 6x6 cms	More than 8x8cms
Granulation tissue	More than 50% wound surface covered with granulation tissue.	25-50% wound surface covered with granulation tissue.	Upto 25% wound surface covered with granulation tissue.	No granulation tissue.

		ion tissue.		
Slough tissue	No slough tissue.	Upto 25% wound surface covered with slough tissue.	25-50% wound surface covered with slough tissue.	More than 50% wound surface covered with slough tissue.
Pain	No pain	Localized pain during movement & not during rest	Localized pain during rest but no disturbed sleep due to it	Continuous pain
Discharge	No discharge	Scanty occasional	Often discharge with blood on dressing	Profuse, continuous
Smell	No smell	Bad smell	Tolerable unpleasant	Foul smell which is intolerable
Burning sensation	No Burning	Little localized and sometime felling of burning sensation	More localized and often burning sensation which does not disturb sleep	Continuous burning with disturbed sleep
Itching sensation	No itching	Slight, localized itching sensation which is relieved by rest	More localized and often itching but not disturbed sleep	Continuous itching with disturbed sleep
Edema	No edema	Slight edema, which is	More localized edema with non-pitting edema	Continuous edema with pitting edema

		relieved by rest.		
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CASE HISTORY

A 45 year old, non-diabetic, non-hypertensive male, working as Corn seller resident of Bengaluru, he visited OPD of *Shalya Tantra* at KTGAMC Hospital, Bengaluru On 21/7/2023 with C/o non healing ulcer, watery discharge with red color, foul smell, mild pain while walking since 1 year, c/o blackish discoloration in left leg since 3 years. This was the first occurrence of such an ulcer on his leg, and the patient did not have any family history of the same.

Clinical Findings

The patient examination results; Bowel, appetite and micturition were normal. He had disturbed sleep due to ulcer with discharge. His systemic and vital signs were within normal limits. A vertically oval shaped ulcer with 8cm x 6cm x 1.4 cm (Length, Breadth, Depth) was present on the lower lateral aspect of the left leg above and on the lateral malleolus.

Rogi Pariksha (Examination of the patient)

Patient with *Vata Pitta Prakruthi*, *Alpa Upalipita Jihwa* (slightly coated tongue), *Vataja Nadi*, *Anavabadha Mala* (normal bowel movements), normal *Shabda* and *Sparsha*.

Roga Pariksha (Examination of the disease)

Dushta Vrana on the lateral aspect of the left leg. The characteristics of *Dushta Vrana* are *Ativivrita* (broad base), *Bhairava* (ugly look), *Vedana* (pain), *Dirghakalanubandhi* (chronicity).

Table 4: Local Examination.

SN	Stanika Pareeksha of Dushtavrana	
1.	Vrana - Type	Nija Vrana
2.	Parigraha	Twak, Raktha, Sira, Mamsa & Medas
3.	Rogadishtana	Adhakaya - Vaamapada
4.	Avastha	Pakwa
5.	Prognosis	Krichrasadhya

Vrana Pareeksha

Number - 1

Site - above and on lateral malleolus of left leg

Size - Length: 8 cm, Width: 6cm & depth 1.4cm

Edge and margin - Sloping, irregular margin,

Floor - Covered unhealthy granulation tissue

Base – Indurated

Discharge - Seropurulent

Surrounding area - Pigmented with black colour. (Ref. Table 8).

Tenderness - Slightly was Present.

Edema - Pitting edema of dorsum of left foot.

A few varicose veins were present in lower left leg. Varicosity on the calf region tested positive for Trendelenburg test and negative to Mose's sign. A palpable pedal pulsation confirmed that varicose ulcer and differentiated it from a deep vein thrombotic ulcer. Doppler study confirmed the absence of DVT and left sapheno-femoral and sapheno-popliteal vein incompetent.

Treatment

The patient was prescribed the following procedures and Ayurvedic medicines.

Classical *Virechana* followed by *Jalaukacharana* to Ulcer edges. *Vrana Prisheka* with *Panchavalka kashaya* and *Vrana Pichu* with *Jathyadi Ghrita*.

Table 5: Treatment chart

Procedure	Medication	Dose	Duration
<i>Deepana, Pachana</i>	<i>Chitrakadi Vati</i>	1BD	3 days
<i>Snehapana</i>	<i>Panchatikta Guggulu Ghrita</i>	Day 1 - 30ml Day 2 - 60ml Day 3 - 90ml Day 4 - 120ml	4 days
<i>Sarvanga Abhyanga</i>	<i>Ksheera Bala Taila</i>	Qs	3 days

<i>Bashpa Sweda</i>			
<i>Virechana</i>	<i>Trivrut lehya</i>	50gm	On 8 th day, 9 Vegas
<i>Paschatkarma</i>	Rice gruel	On 8 th , 9 th , 10 th days	3 days

Table 6: Oral medications are:

<i>Kaishora Guggulu</i>	2 BD Before food	Duration of 3 months along with location treatment
<i>Triphala Guggulu</i>	1 TID After food	
<i>Gandhaka Rasayana</i>	1 BD After food	
<i>Manjishyadi Kashaya</i>	10ml BD with warm water Before food	

Table 7: Local treatment medicines

<i>Panchavalka Kwatha</i>	<i>Vrana Pariseka</i> QS 2 days once	Local treatment done for 4 months from day 1 to till complete healing
<i>Jathyadi Ghrita</i>	<i>Vrana Pichu</i> QS 2 days once	



Fig. 2: During treatment



Fig. 3: After treatment



Fig. 1: Before treatment

Table 8: Local Assessment Parameter with results

Assessment Parameter	Before Treatment	After Treatment
Number	1	Nil
Site	Left leg lower lateral aspect of the lateral malleolus above and on it.	Fibrous Scar mark
Wound Size	8cm x 6cm x 1.4 cm (Length, Breadth, Depth)	Healed
Granulation tissue	Upto 25%	More than 50%
Sloughing	Upto 25%	Nil
Pain	Localized pain during movement & not during rest	No pain
Discharge	Seropurulent- Moderate	No discharge
Burning Sensation	Localized to ulcer site with felling of burning sensation	No
Itching	Slight, localized itching sensation	No
Edema	Pitting edema	Not present
Discoloration	Peripheral black color of Skin	Mild lightening

DISCUSSION

In venous ulcer discomfort and tenderness of the skin, pigmentation and eczema exist for months or years before a venous ulcer to develop. The ulcer is painful in its beginning but once it chronic becomes painless. Healing of wounds whether internal or external involves a series of overlapping events viz inflammation, cell migration, angiogenesis, matrix synthesis, collagen deposition and re-epithelization.

Vrana with Nija Kaarana, Parshwa Sthana, Dushta Avastha, Chathurasra Akruthi, Dirgakaalanubandhi, Kruchra Sadhya, Pancha Lakshanas of Vedana, Akruthi,

Gandha, Vrana and Srava having Pitta and Vata predominant features. Virechana helped to detoxify the body making Dosha in normal status, followed by Jalauka Avacharana in ulcer edges so that leech saliva containing Hirudin, Fibrin, Hirustasin, Bdelins, Hyaluronidase, Tryptase inhibitor, Eglins, Factors Xa inhibitor, Carboxypeptidase A, Acetylcholine etc. which Inhibits blood coagulation by binding to thrombin and acts as thrombolytic, anti-inflammatory, vasodilator etc. Oral medication Kaisora Guggulu indicated for Vatarakta, Sarvavrana, Rasayana, Kantikaraka, skin diseases with discharge by elimination of toxins, relieving inflammation and swelling. Triphala Guggulu is Agroushadi of Vrana with anti-inflammatory and anti-infective action of Guggulu. Triphala^[8] is Vatashamaka, Vedanasthapana, Vrana shodhana, Vrana Ropana, Shothahara, Vatanulomaka, Kledahara, deepana and Amahara properties. Gandhaka Rasayana acts as Rasayana and Agnideepaka which is essential for Amapachana and Strotoshodhana. Mahamanjistadi Kashaya is Ushna Tikshna Guna and its Rakta Shuddhikara Guna indicated for Vataraktha. Panchavalkala Kwatha Parisheka is effective in relieving the symptoms such as Srava, Daha, Gandha and Vedana. Jathyadi Ghrita^[7] contains leaves of Jati, Nimba, Patola, Katuki, Daruharidra, Haridra, Madhuka, Manjishta, Abhaya, Karanja, Sariva. Tutta, Madhuchista each 1 parts, Go Ghrita 4 part, water 16 part. Indicated for Vrana Shodhaka, Vrana Ropaka, Dushtavrana.

CONCLUSION

In Dushtavrana treating Systemic disease improving local circulation with combination of internal medication and local application showed significant result of ulcer healing. By applying knowledge of Shastiupakrama in Dwivrana Chikitsa of Acharya Sushruta helped Dushta Avastha of Vrana to Suddha, Ruhyamana and Roodha Vrana i.e., edges firmly adhere, no pain, no swelling, leaving cicatrices of the same line with surrounding skin.

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How to cite this article: Radhika Pachamalai. A Case Study on Dushta Vrana w.s.r to Venous Ulcer. J Ayurveda Integr Med Sci 2024;8:280-286.
<http://dx.doi.org/10.21760/jaims.9.8.43>

Source of Support: Nil, **Conflict of Interest:** None declared.
