

A Review Article on *Dushtavrana*

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Abstract—*Vrana* in surgical practice requires prominent attention due to its potential complications. *Vrana* arises from various causes and often necessitates prolonged treatment. When compounded by poor dietary habits, improper lifestyle and lack of control over senses, *vrana* may deteriorate into a more severe condition known as *dushta vrana* (infected or non-healing wound). A *dushta vrana* refuses to heal or heal very slowly inspite of best efforts. Chronic ulcer is a discontinuity, often excavation of skin exhibiting loss of epidermis and portion of the dermis and even subcutaneous fat. Under normal physiological condition healing is inevitable. The process of healing is divided into four phases, viz haemostasis, inflammation, proliferation, and remodelling.

Keywords— *Vrana*, *Dushtavrana*, *Chronic ulcer*.

I. INTRODUCTION

Ayurveda offers a profound understanding of *vrana* (wound) and its management. *Acharya Sushruta* has extensively elaborated on *vrana*. If neglected, *vranas* can become influenced by the *tridoshas* (*Vata*, *Pitta* and *Kapha*) and transform into *dushta vrana* (infected or chronic ulcer). In western medical terms, *dushta vrana* correlated with chronic ulcers.

The prevalence rate of non- healing ulcer as per Indian epidemiological data was 4.5 per 1000 population (2005). It is estimated that almost 10% of the population would develop a chronic wound during lifetime with wound mortality rate of 2.5%. The clinical signs and symptoms of non- healing ulcers include pain, increased wound exudate, presence of slough and unpleasant odour.

Vrana chikitsa (wound treatment) is a cornerstone of *Shalyatantra* (surgery) in Ayurveda.

Acharya Sushruta formulated *shashtiupakramas* (sixty procedures) for *vrana*.

- *Shodhana* (purification): Drainage and lavage to remove necrotic tissue and contamination.
- *Ropana* (healing): Promote wound healing.

II. REVIEW OF LITERATURE

Vrana- Derivation

The word '*vrana*' is derived from the verb root, "*vrana gatra vi chornaehi*". The destruction or discontinuity of body part is called *vrana*. *Dalhana* gives the meaning of verb *vrana* as causing discoloration of the body.

Vrana -Definition

As the scar of a wound never disappears even after complete healing and as its imprint persists lifelong. It is called *vrana* by the wise.

Nidana

Two types of *vranas* explained by *Acharya Sushruta* are *nija* and *aganthuja vrana*. The *nija vranas* occur because of deranged *doshas* exacerbated by their respective etiological factors. *Aganthuja vrana* are caused by external injuries.

As per *Haritha Samhitha*, based on *dosha dushti*, the *vranas* are classified into *shuddha vrana* and *dushta vrana*. The *nidanans* are enumerated by *Acharya Harita* as contaminated foods and drinks, severe exercise, emotional factors like anger, fear and grief.

NIJA KARANAS	AGANTHUJA KARANAS
<i>Siragranthi</i>	Bites of animals or birds
<i>Prameha</i>	Fall or hit blow
<i>Kushta</i>	Injuries caused by weapons, bones
	Wounds caused by action of alkali or acids.

Samprathi Nija Vrana

Due to the *nidana karanas*, the *tridoshas* will be vitiated and gets lodged in *vrana adhishtana* to precipitate *vrana*.

Aganthuja Vrana

It's caused by trauma from *purusha*, *pashu*, *pakshi*, *peedana*, *prahara*, *visha*, *Kapala*. *Sushruta* has mentioned 6 types - *chinna*, *bhinna*, *viddha*, *kshata*, *picchita*, *grishta*. *Ashtanga sangraha* mentions 3 types and *Ashtanga Hridaya* mentions 8 types.

Kashyapa Samhita also accepts the fact that *doshas* are the inevitable factors for the manifestation of *vrana*. *Vrana* is not the *doshas* that afflict a person, but rather the combination of *doshas*. Even though the *vrana* is manifested at first on the *twak*, later it extends to the deeper structures such as *meda*, *asthi* etc. and finally it results in *dushta vrana*, thus destructing considerable amount of *dhatu*.

Lakshanas of Dushtavrana According to Different

Acharyas

Susrutha Samhita

Dushtavrana may be either elevated or depressed, extremely narrow or wide mouthed, soft or hard, the colour varies from black, red or white, presence of slough/pus/flesh/putrid pus are characteristic features. The patient may suffer from burning sensation, itching and redness over the surrounding region.

Charaka Samhitha

Acharya Charaka have mentioned 12 characteristic features. *Dushta vrana* may be depressed white/yellow/blue/grey in colour. It may have with a narrow mouth.

Asthanga Hrdhaya

Acharya Vagbhata mentions the features such as too hard or too soft, too elevated or too depressed, too cold/too hot. Redness, itching and burning sensation will be present over surrounding region. *Dushta vrana* manifested as red/white/black in colour.

Madhava Nidana

As per the *Samhita*, *dushta vrana* posses the characteristic features such as purulent profuse discharge, having a large cavity with foul smell associated with severe pain. *Acharya* also mentioned that *dushta vranas* are one having the features that are opposite to *shuddha vrana*.

Sharanghara Samhita

Acharya stated that *dushta vranas* posses the qualities which are opposite to *shudha vrana*.

Ashtanga Sangraha

Acharya mentions that the *lakshnas* are too elevated/ too depressed, too cold / too hot, black/ white, covered with pus. Redness, itching and burning sensation will be felt around the wound.

Sadhyaasadyata

In *Ayurveda*, the prognosis and curability of wounds (*vranas*) are influenced by several factors that determine whether a wound is easy to heal (*sadhya*), whether difficult to cure (*yapya*), or incurable (*asadhya*). These factors include the site and shape of the wound, presence of foreign bodies, underlying diseases and the constitution of the patient. Here's a detailed explanation based on the factors mentioned

1. Site of the wound:

- *Easily healable sites*: Wounds located on the buttocks, rectum, forehead, cheeks, lips and root of the neck tend to heal quickly. These areas generally have better blood supply and less exposure to contamination.
- *Difficult to heal sites*: Wounds near the eyes, teeth, nose, temporal area and hip joints are harder to heal. These areas might have complex anatomical structures, limited blood supply or higher risk of infection.

2. Shape of the wound:

- *Easily healable shapes*: Long, rectangular and triangular wounds are considered easier to treat. These shapes may allow easy application of treatments and better healing dynamics.
- *Difficult shapes*: Irregularly shaped wounds need special care and attention as they may not respond to treatment due to uneven healing patterns and potential

complications.

3. Presence of foreign bodies:

- Wounds containing foreign bodies (such as dirt, splinters or other contaminants) are more challenging to heal. Foreign bodies can cause ongoing irritation, infection, and delayed healing.

4. Specific diseases:

- *Diseases that hinder healing*: Patients with conditions like leprosy, poisoning, tuberculosis (TB) and diabetes often experience delayed or complicated wound healing. These conditions can impair the body's natural healing processes and immune response.
- *Healthy conditions for healing*: Strong, young patients with high tolerance and robust constitutions tend to heal wounds more effectively. Their bodies are better equipped to manage and recover from injuries.

5. Constitution of the patient:

- The patient's overall health, strength, age and tolerance levels play a crucial role in wound healing. Strong and young individuals with high tolerance capacity have a more efficient healing process

Chikitsa

Vrana Chikitsa (wound treatment) is a significant aspect of *Shalya tantra* (surgical science) in *Ayurveda*. Treating *dushta vrana* (infected or chronic ulcers) involves specific procedures and medicinal formulations to promote healing. Here's a detailed explanation of the Ayurvedic approach to treating *dushta vrana*:

Vrana Chikitsa in ShalyaTantra

1. Shodhana (Purification / Cleansing)

- *Oordhva Shodhana*
- *Adaha Shodhana*

2. Apatarpana (Depletion therapy):

- *Apatarpana* aims to reduce the stress of excess doshas and toxins in the body. It is particularly useful in managing conditions with excess *Kapha* and *Meda* (fat / adipose tissue).

3. Raktamoksha (Bloodletting):

- Bloodletting is employed to remove vitiated blood from the wound site. Techniques such as leech therapy (*Jalaukavacharana*) and venesection (*Siravyadha*) are preferred. This helps reduce inflammation and promotes healing.

4. Kashaya (Astringent decoctions):

- *Aragwdadi Gana*: A group of medicinal plants including *Aragwadha* (Cassia fistula), which have antimicrobial, anti-inflammatory and healing properties. Decoctions (*Kashaya*) made from these plants are used for washing and cleansing the wound (*Davala*).
- *Surasadi Gana*: Another group of medicinal plants including *Surasa* (*Ocimum sanctum*) with similar therapeutic properties. These are also used for wound cleansing.

5. Taila (Medicated Oils):

- Oils prepared with the decoctions of *Aragwdadi* or

Surasadi gana dravyas are applied to the wound for *vrana shodhana* (wound cleansing). These oils help in removing necrotic tissue, reducing microbial load and promoting granulation tissue formation.

- *Kshara Drava*: Alkaline solutions prepared from specific herbs can be used in the oil formulation. *Kshara* has a caustic property that helps in debridement (removal of dead tissue) and stimulates healing.

III. DISCUSSION

The principle of management of *vrana* is described in ayurveda in a classical way. After the observation of different stages, *doshas* of *vrana*; the principle of treatment is decided. Seven procedures are broadly delt for the treatment of *vrana*. In case of *ashudha vrana*, primarily *shodhana* then *ropana* and in case of *s huddha vrana* only *ropana* is advocated. The process of *shodhana* aims at keeping the wound bed free from unwanted and harmful materials, thus minimizing reactionary inflammation and *ropana* maintains a nutritional reserve in the site and moderates the vitiated *doshas*, so the wound undergoes an uneventful healing course.

Since *dushta vrana* is very difficult to treat, it needs a special attention. In *dushtavrana*, *oordhava* and *adaha shodana* should be employed. *Kashaya* of *aragwdadi* and *surasadi ghana dravyas* should be used for *dhavana* and *taila* prepared with *kashaya* of same *dravyas* or with *kshara Dravya* is used for *vrana shodana*.

Mechanism of Wound Healing

The wound is the disruption of the anatomic structure and function in any body part, healing is a complex interrelated process and sustained restoration of that structure and function.

Most sources indicate that wound healing is made up of an orderly sequence of events. This is characterized by specific infiltration of specialized cells into the wound accomplishing specific tasks.

Injury triggers an organized and complex cascade of cellular and biochemical events that result in healed wound. The wound healing response can be divided into 3 distinct overlapping phases.

- Haemostasis and inflammation.
- Proliferation.
- Maturation or remodelling.

IV. CONCLUSION

Dushtavrana represents a significant challenge in both Ayurvedic and modern medical practice. Understanding its causes, symptoms and effective management strategies is crucial for optimal patient outcomes. Integrating traditional Ayurvedic principles with modern medical advancements can provide a holistic approach in treating *dushta vrana*, ensuring comprehensive care and promoting faster recovery. More research and clinical trials are needed to confirm and refine these combination treatment regimens to improve efficacy and patient satisfaction.

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