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**"A REVIEW ARTICLE – AYURVEDIC ASPECTS OF DUSHTA
VRANA"**

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Abstract: The destruction/ break/ rupture or discontinuity of body tissue or part of body, is called Vrana¹. Dushta Vrana is an issue that is frequently seen in surgical practice. Dushta Vrana (Non-healing ulcer) can harm the patient's state, causing various complications and even death. Dustavrana (non healing ulcer) are a frequently encountered problem in present era produced commonly as a complication of trauma or pathologic insult and it causes long term agony to the patient. Slough(dead tissue), infection, and foreign bodies are all factors that might cause a wound to take longer to heal. The issue of Non-healing ulcers management with ayurvedic remedy is one of the major areas of the research and has come under increased study. Acharya Sushruta forwarded concept of shashti upkrama for the management of dushta vrana.

Keywords:- Dushta Vrana, shashti upkrama, Acharya Sushruta, Non-healing ulcers.

1. Introduction: In Ayurveda, particularly Sushruta has mentioned various types of Vrana and their management, which is of prime importance in any surgical practice / procedure. In recent past, brilliant progress of surgery in various fields has immensely reduced the incidence of wound infection by decreasing the impediments associated with wound healing to certain limits².

Healing of Vrana is a natural process but due to the involvement of vitiated Doshas, Vrana becomes Dushta and normal healing process gets delayed. Achieving better wound healing with minimal scar and controlling pain effectively are the prime motto of every surgeon.

Sushruta was well aware about various complications of dushta vrana. Acharya Sushruta has explained six forms of Dushta Vrana³, and Dushta Vrana treatment is comprised of a variety of medications, which are classed as Vrana Shodhana and Vrana Ropana. Sushruta has forwarded this concept regarding Shashti Upakrama (60 modalities of wound management) for Vrana Chikitsa⁴.

Surgery and Surgical procedures are the impartial part of medical field and a

proper management of wound is very important to prevent further complications. Giving importance to the minutest details of the stages of wound healing, Acharya Sushruta has explained *Shashti Upakrama* for the treatment of a wound. It covers the management of abscess, the created wound and even the scar formed so that in the process of healing even the cosmetic disfigurement is minimized⁵.

Brief explanation of *Shashti Upakrama* described in *Sushrut Samhita*⁷

Aptarpana(fasting) - *Aptarpana*, that means *Langhana*. *Langhana* is used probably to break the pathology in very initial stage. As per Ayurveda classics, *Nija Vyadhi* start with the development of *Aama* produced due to diminished *Agni*, later on that after association with *Doshas* produces *vyadhi*. In case of *sophaa* when *Aam* associates with *Dosha* and brings them in *vidagdhavastha*, that cause *pakva sopha* leading to *puya* formation that require active and aggressive management. *Aptarpana* helps to improve the *Agni* and creates a barrier for pathological content

Incorporation of Shashtiupakrama in TRIVIDHAKARMA

Poorva karma	Pradhana karma	Pashchat karma
Apatarpana	Chedana	ravapana, Utkarika, Kashaya,
Alepa	Bhedana	varti, Kalka, Sarpi, Taila,
Parisheka	Dharana	Rasakriya, Avachurnana,
Abhyanga	Lekhana	Vranadhoopana, Utsadana,
Sweda	Eshana	Avasadana, Mrudukarma,
Vimlapna	Aaharana	Varunakarma, Ksharakarma,
Upanaaha	Vyadhana	Agnikarma, Krishnakarma,
Pachana	Visravana	Pandukarma, Pratisarana,
Visravana	Seevana	Romsanjanana,
Snehana	Sandhana	Omaphaharana, bastikarma,
Vamana	Peedana	Uttarabasti, Bandhana,
Virechana	Shonithasthapana	Patradana, Krimighna,
	Yantra	Bhrimana, Vishagna,
		Shirovirechana, Nasya,
		Kavala, Dhooma,
		Madhusarpi, Ahara,
		Rakshavidhana

Vrana Chikitsa - Shashtiupakrama
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Table no. 1: Vran Upakrama according to Acharya Sushruta⁶

Sr .no.	Sushrut (60 Upakrama)
1	Apatarpana, Alepa, Parisheka, Abhyanga, Sweda, Vimlapana, Upnaha, Pachana, Visravana, Snehana, Vamana, Virechana, Chhedana , Bhedana, Darana, Lekhana, Eshana, Aaharana, Vyadhana, Vistravana, Seevana, Sandhana, Peedana, Shonita Sthapana, Nirvapana, Utkarika, Kashaya, Varti, Kalka, ghrita, Taila, Rasakriya, Avachurnana, Vranadhoopana, Utsadana, Avsadana, Mridu Karma, Daruna Karma, Ksharkarma, Agnikarma, Krushnakarma, Pandukarma, Pratisarana, Romsanjanana, Romaphaharana, Bastikarma, Utter Bastikarma, Bandha, Patradana, Krimighna, Bhrimhan, Vishaghna, Shirovirechana, Nasya, Kavala, Dhoom, Madhusarpi, Yantra, Ahar, Rakshavidhi

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Aam associates with *Dosha* and brings them in *vidaghavastha*, that cause *pakva sophaa* leading to *puya* formation that require active and aggressive management. *Aptarpana* helps to improve the *Agni* and creates a barrier for pathological contents. **Alepa (application of medicated paste)-** used for pacification of local inflammatory process.

Parisheka(spray)-mainly used for the *shamana* of local *kupita Doshas* and reduces sign and Symptoms of inflammation. *Parisheka* subsides mainly *Vedna* and *Daha* locally.

Abhyanga(oiling)- with the help of *Abhyanga Srotorodha* might be relieved and opening *srotasa* at the site of *sophaa*. **Swedana(fomentation)-**should be done in severe pain, indurated wound and hard wound. It relieves pain.

Vimlapana – We perform vimlapana with the help of finger tip, thumb, or with green stick softly rubbing at the site of *sophaa* that may work by dispersing the accumulated *Doshas* in the corresponding *srotas* so that *srotosangha* may be release and pathology may break. According to modern medical science, before developing a cutaneous abscess, mostly the focus lays in side any sweat gland, hair follicle root or close sebaceous gland, so *vimlapana* may help to open of mouth of that particular gland.

Upanah- It is a form of *swedna*, which is used for the purpose to subside or aggravate the process of *Sopha Paka*.

Doshas involved in *sophaa* are in *vidaghdaavastha* so after *upanah*, *sophaa* will go under *pakvastha* and if *Doshas* are *avidagdha* then due to effects of *upanah*, the *Doshas* after *vilayana* circulate in to whole body. *Upanah* breaks the *Samprapti* of *sopha* and *sopha* subsided completely.

Pachana- when *upanah* do not work properly and *sopha* neither subsided nor become *pakva*, *Acharya Sushrut* advice to use internal medicine. *Pachan of aam Doshas* by administering *pachana* drug by orally. If involved *Doshas* are *avidagdha* then with the use of *pachana* drug the local focus is broken and *Doshas* left free into blood stream.

Visravan is a kind of *rakta mokshana* with the use of *Sringa*, *Alabu*, *jalauka* and *siravedha*. The vitiated (*Kupita*) *dosas* are removed from the site of *sopha* with the *rakta mokshana*. If *dosas* are present superficially/ skin then method of *rakta vishravana* should be done by *jalaukavcharana*. If *dosas* are little deep then *alabu*, *shringa* and *Prachan* should be used. If *dosas* are spread throughout body and deep seated, then method of bloodletting should be *Siravedha*. This may work as illuminating the *dosas*

outside the body and diminishes the local sign and symptoms⁸

Snehana (internal use of ghee, oil etc)

Vamana (emesis) and *Virechana* (purgation)- Thses are vital to remove the vitiated *Dosha* from the body and to set right the *Jataragni* (digestive fire) and *Dhatwagni*, which is very vital to improve the immunity of a person. The *Shodhana* (detoxification) of the body in turn normalises the vitiation of the *Dosha* and prevents recurrence of the wound (disease) as well. By these measures, generally the *Vranashopha* subsides and does not get suppurated to cause a *Vrana*. Once suppurated, Sushrutha explains certain surgical procedures for the incision and drainage of pus from the wound. When *Sroto Avarodha* is eliminated, venous return is re-established, the toxins are removed and thus their deleterious effects are eliminated. *Puyanirharana* (drainage of pus) is important procedure to clear the pathogens and toxins of inflammation from the area, so that they don't get strengthened and involve newer and farther tissues⁹.

Darana - incising upon the abscess with the use of medicines (not instruments), *Chedana* (excision), *Bhedana* (incision using instruments), *Lekhana* (scrapping), *Eshana* (probing), *Aharana* (extraction), *Vyadhana* (puncturing), *Visravana*

(draining) and *Sivana* (suturing) have been mentioned (10) it is termed as *Sandhana*.

Once through the surgical procedures like *Darana*, *Chedana* etc. mentioned above if the abscess is completely drained and the created wound is cleaned, the wound can be sutured for early healing. When certain drugs in the form of ointments are used to cause the union of edges of the wound (non-*Peedana* (squeezing) is a method of pressing the abscess area in order to cause *Puyanirharana*.

When abscess is situated over a *Marmapradesha* (vital regions) where the usage of instruments is contraindicated or if the patient is not consenting to surgical procedure to drain the pus, then medicines are made into a paste and applied over the abscess leaving its mouth uncovered.

Lepa is allowed to dry. *Lepa* dries it creates pressure over the abscess and thus squeezes out the pus from the abscess and draining it non-surgically.

Shonithasthapana is a measure of arresting haemorrhage. During the process of incising and draining out the pus from the abscess, the surgical procedures may create varying intensity of haemorrhage. For this purpose, Sushrutha has advocated *Shonithasthapana*. Sushruta forworded mainly four methods to arrest haemorrhage i.e. *Sandhana* (drugs with *Kashaya Rasa*

are used for the purpose of unification of the wound)

Skandana (ice cold liquids used locally promotes coagulation)

Pachana (ash of plants cause desiccation) and **Dahana** (cauterization causes contraction of blood vessels). Acharya Sushruta has considered *Rudhira* (blood) as the main support for the *Shareera* (body), the loss of blood or shonit can destroys the normal body functions. After surgical drainage of the abscess, Acharya Sushrut has advocated *Shonithasthapana* measures. Further after the abscess has been drained and all the pus is removed and a wound is created.

Sushrutha has explained methods for cleansing (*Shodhana*) and healing (*Ropana*) of the wound. **Nirvapana** (irrigation with cold materials) helps to reduce *Daha*, *Paka* and other symptoms manifested. The process of inflammation ends with the drainage of pus. Any remnant symptoms like pain, bleeding, hemorrhage, hyperaemia etc is set right by this process of irrigation. The process carried out along with milk, ghee etc. for this purpose is one of the important methods mentioned.

Utkarika is the application of semisolid pastes of *Vatahara Dravya* over the wound. The wound edges are prevented

from becoming dry and hard by the application of *Utkarika*.

Kashaya (decoction)
Varti (wick), Kalka (paste)

Ghrita (ghee)
Taila (oil)

Rasakriya (semisolid extracts)

Avacurnana (dusting) are procedures mentioned for the purpose of *Shodhana* and *Ropana* of the formed wound.

Depending on whether cleansing (if the wound is unhealthy) or healing (if the wound is clean) is required; various drugs are used in these mentioned forms. For e.g. *Dashamoola Kwatha* is used for cleansing vitiated *Vata*, *Nyagrodhadi Kwatha* for vitiated *Pitta* and *Aragvadhadi Kwatha* is used for cleansing *Kapha* vitiation.

surgically), Dusting of above drugs is also mentioned when the wound is deeply seated, foul smelling and covered with thick slough. Once the *Vrana* is *Shuddha*, *Ropana* is mentioned For this purpose, *Madhu* and *Ghrita* is commonly used. The antibacterial property of honey is mainly due to inhibins in honey. These inhibins consist of hydrogen peroxide, flavonoids, and phenolic acids, plus many other unidentified substances. The glucose content of honey and the acid pH (typically between pH 3 and 4) may assist in the bacteria-destroying action of macrophages. This chemical debridement

action of honey, apart from accelerating wound healing, spares the necessity for surgical debridement under general anaesthesia. Ghee contains several saturated and unsaturated fatty acids which are capable of taking part in metabolic processes involved in healing of any wound.

Dhupana (fumigation) is one of the unique methods mentioned for the removal of *Krimi* (microorganisms), *Kandu* (itching), *Ruja* (pain) etc. *Dhupana* with the fumes of ghee mixed with *Guggulu* (*Commiphora wightii*), *Vacha* (*Acorus calamus*), *Sarshapa* (*Brassica juncea*) etc. is mentioned. Fumigation was used for the purpose of elimination of any remnant infections from the site as well as to prevent the subsequent contamination of the created clean wound.

Vaikrtapaha Chikitsa needs to be implemented so that as the wound heals the scar formed would be minimal and cosmetically acceptable.

Utasadana (elevation) and *Avasadana* (depression) are measures mentioned for increasing or decreasing the local granulation tissue so that the wound floor is maintained same as that of the peripheral tissue. Depressed wound floor or elevated wound floor would surely lead to an unacceptable scar area and hence various measures have been mentioned.

Mridu Karma (softening) is a measure mentioned to soften the edges of the wound by the usage of *Vatahara* drugs in the form of pastes etc. or *Raktamokshana* - blood letting (using *Shrunga*). This was a method mentioned to prevent callousness. The wound as it heals sometimes becomes chronic or callous which delays the wound healing and hence this measure is mentioned. Similarly, **Daruna Karma** (hardening) is mentioned when the wound becomes soft. Wounds having less tensile strength undergo dehiscence and thus wound healing gets delayed. This measure restored the tensile strength of the wound thus restoring the process of wound healing.

Kshara Karma (application of caustics) is mentioned to be used when there is excessive raised, hard, indurated tissue or excessive slough over the wound area. As the wound heals, secondarily it may again get infected resulting in the formation of slough which is to be removed and for this purpose application of *Kshara* is mentioned. *Kshara* helps to debride the slough and also has action against *Staphylococcus*, *pseudomonas* etc, and thus is able to restore a clean wound and aid the healing process ¹⁰.

Agnikarma (thermal cautery) was mainly mentioned as a measure to arrest *Raktasrava* (blood loss). After caustic

application, or by any other reason, if there is haemorrhage from the wound, Sushrutha has mentioned *Agnikarma* for the purpose of arresting haemorrhage¹¹.

Krushna Karma (blackening) is a protocol for darkening the light-coloured scar formed in the area and for this, *Bhallataka* is mentioned. *Pandu Karma* (lightening) is a procedure for reducing the colour of hyper pigmented scar to normalcy for which application of *Manjishta* (*Rubia cordifolia*), *Haridra* (*Curcuma longa*), *Daruharidra* (*Berberis aristata*) etc. is mentioned¹².

Pratisarana (anointing) is mentioned where in powder of hen's egg, *Mukta* etc is applied or rubbed over the scar when the scar formed is smoother than the surrounding skin. *Romasanjanana* (repilation) is a measure for re-growth of hairs when the hairs over the scar area are lost and causes cosmetic disfigurement. For this ash of *Hastidanta* (ivory) is mentioned to be used along with *Daruharidra* and goat's milk.

Romapaharana (depilation) is similarly mentioned to remove any excess hair growth over the scar. Hairs act as a foreign body which can prevent the complete healing of the area similarly it can be a source of infection as well. So, the hairs are removed using knife, scissors etc or by the application of *Bhallataka Taila* (oil of

Semecarpus anacardium) with *Snuhiksheera* (latex of *Euphorbia neriifolia*) etc.

Basti (therapeutic enema) and *Uttarabasti* (douching) are the concept forwarded for the treatment of ulcers vitiated by *Vata*, those situated below umbilicus or in the genital regions. As the person is wounded he becomes weak and loses his strength. *Dhatukshaya* (loss of tissue) causes *Vataprakopa* (aggravation of *Vata Dosha*) which can cause wound dryness or dehiscence.

Patradana (covering the wound with leaves),

Bandhana (bandaging and splints) are mentioned to protect the wound, retain softness of the wound and support the affected limb so that the wound healing occurs completely.

Krimighna (disinfection) measure helps to remove *Krimi* from the area and promote healing.

Usage of *Ksharodaka* is mentioned along with various other measures. These measures basically remove the acidic media, remove any remnant slough and prevent the growth of microorganisms thus preventing any chance of recontamination of the healing wound.

Brimhana (nourishing) measure is mentioned to improve the strength of the

emaciated (due to the complications of the wound) person.

Vishaghna (detoxification) measure is mentioned to remove the effects of *Visha* (poisons/toxins) in the body. For this purpose, Sushrutha has mentioned various *Agadha* (antidotes) to be used internally and externally. *Vishaghna* or detoxification remove the pathogens and toxins which accumulate in the body as a result of the pathology of the wound. These toxins or *Amavisha* could contaminate and create recurrence of the wound or be a cause for any subsequent illnesses.

Shirovirechana (cleansing the region above clavicle)

Nasya (nasal medications)

Kavaladharana (gargling) are specifically explained for the management of the wounds caused in the oral cavity, nose etc (regions above the clavicle)¹³. *Madhu* and *ghrita* (application of honey and ghee) is mentioned for early healing of large size wounds. Honey has the inherent quality to increase the formation of granulation tissue, stimulate tissue growth, and reduce oedema and inflammation. *Yantra Karma* (use of instruments) is mentioned for the purpose of removing any remnant *Shalya* or any slough or unhealthy tissue from the wound site and thus makes the area clean and causes the correct healing of the wound.

Ahara (wholesome food) and *Raksha karma* (protective measures) are mentioned to prevent recurrence of the wound and to improve the immunity of the person. Patient is advised *Snigdha*, *Ushna*, *Laghu Ahara* (food which is unctuous, hot and light) which can also maintain the *Agni*.

The place where he stays for recovery (*Vranitagara*), was also advised to be fumigated with the fumes of ghee, *Guggulu*, *Sarshapa*, *Vacha*, *Hingu* etc so that the area is sterilized. Thus these 60 measures were mentioned for the purpose of achieving complete healing of the wound without complications and with minimal cosmetic disfigurement¹⁴.

Modern wound healing process:-

Primary Healing (First Intention)

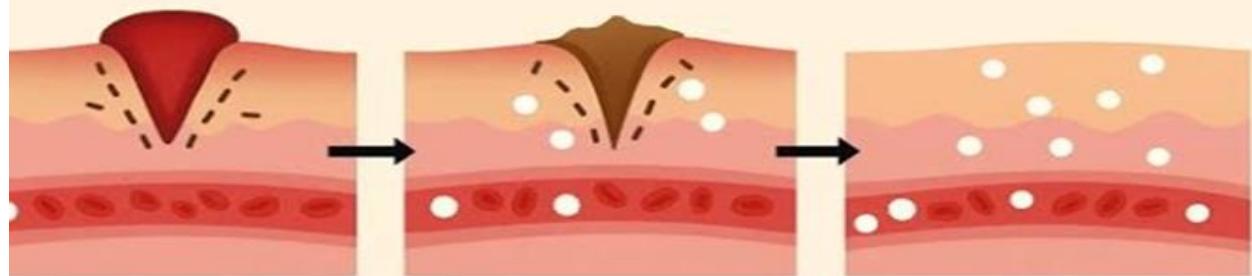
It occurs in a clean incised wound or surgical wound. Wound edges are approximated with sutures. There is more epithelial regeneration than fibrosis. Wound heals rapidly with complete closure. Scar will be linear, smooth, and supple.

Secondary Healing (Second Intention)

It occurs in a wound with extensive soft tissue loss like in major trauma, burns and wound with sepsis. It heals slowly with fibrosis. It leads into a large size scar,

THE MECHANISMS OF WOUND HEALING

How Your Body Restores Itself After Injury



White blood cells will eat any germs that may have come in when your skin was broken.

often hypertrophied and contracted. It may cause disability.

Re-epithelialisation occurs from remaining wound margins. Healing by Third Intention (Tertiary Wound Healing or Delayed Primary Closure)

After wound debridement and control of local infection, wound is closed with sutures or covered using skin graft. Primary contaminated or mixed tissue wounds heal by tertiary intention

Different stages of wound healing

1. Stage of inflammation.
2. Stage of granulation tissue formation .
Here due to fibroblastic activity synthesis of collagen and ground substance occurs.

3. Stage of epithelialisation.
4. Stage of scar formation and resorption.
5. Stage of maturation

DISCUSSION:

The stages through which a Vrana Shopha passes i.e. Amavastha (initial stage of inflammation), Pachyamanavastha (stage of further aggravation of inflammation) and Pakwavastha, till the formation of Vrana, the process of its healing, the complications which can appear during its healing was clearly understood by Sushrutha. Thus, in these sixty measures, there are treatments which are mentioned for managing the Vrana Shopha, there are measures mentioned for managing the formed Vrana and most importantly there are measures mentioned

for repairing the scar, so that it is cosmetically acceptable to the patient.

In case of ashudha vrana, primarily shodhana then ropana and in case of shuddha 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.

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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