

WOUND HEALING PROPERTY OF *PANCHAVALKALA* IN THE MANAGEMENT OF *DUSHTA VRANA* –A CASE STUDY

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ABSTRACT

Many times even a single drug is enough to treat signs and symptoms of many diseases, but combinations with other drugs having same *Guna & Karma* is more useful, hence many ayurvedic texts have mentioned groups of herbs with same therapeutic action under *Gana* for treating various diseases. These herbal groups are more potent than single drug. *Panchavalkala* is one such group where barks of five trees of *Ficus* species are used in treatment. Use of panchavalkala in management of wound (*vrana*) is mentioned by charak samhita, sushrut samhita and many ayurvedic texts including Nighantus. A case of *Dushta vrana* (infected wound) is treated with *panchavalkala* in this study with promising results.

KEYWORDS: *Gana, Panchavalkala, Dushta vrana*, wound management.

INTRODUCTION

Bhishag (doctor), *Dravya* (medicine), *paricharak* (paramedical staff), and *rugna* (patient) are 4 most important parts of treatment. Out of them medicine is given second most importance by ayurved physicians after *vaidya*. The medicine to be used should be available in multiple forms (*Bahukalpa*), should have many acting principles (*Bahuguna*), should be potent (*Sampanna*) and suitable for particular disease (*Yogya*).^[1]

Detailed study of the medicines (*Dravya*) is done in *Dravyaguna vigyan* regarding their morphology, habitat, *ras*, *veerya*, *vipaak* and *karma* (therapeutic action). These medicines are arranged and grouped by many ayurvedic texts according to their morphology, action etc.

Many times even a single drug could be enough to treat signs and symptoms of many diseases, but combinations with other drugs having same *Guna & Karma* is more useful, hence many texts including Charak–Sushrut Samhita have mentioned groups of herbs with same therapeutic action under *Gana* for treating various diseases. These herbal groups are more potent than single drugs.

Panchavalkala is one such group where barks of five trees of *Ficus* species are used in treatment. In Raaj Nighantu it is described under *Misrakaadi Gana*. The other name of this group mentioned is *panchvetas*.^[2]

Bhaavprakash have mentioned *Panchavalkala* in *vataadi varga*. He has included 5 herbs under *Kshirivruksha* and their barks under *panchvalkala*. They are *Nyagrodh*, *Udumber*, *Ashwattha*, *Parisha* and *Plaksha*. According to him some texts (nighantus) have included shirish or vetas instead of parisha.

These herbs have *Kashaya rasa* (astringent) dominance. They are *Shita-veerya* and *Ruksha* in nature. They can be used for fair complexion, for treatment of *yoniroga* (vaginal disorders like leucorrhoea, menorrhagia etc.), *vrana* (various wounds), *medoroga* (obesity), *visarpa* (erysipelas), oedema, *stanyakshaya* (scarcity of breastmilk), fracture of bones and diseases caused by vitiation of *pitta dosha*, *kapha-dosha* and *rakta dhatu dushti*. Barks are especially cold in nature (*sheeta-veerya*), *Grahi* and are useful in treatment of wound, oedema and erysipelas.^[3]

Charaka has mentioned *Nyagrodhaadi* and *Baladi* herbs for *lepa*, *nirvapana* and *parisheka* (irrigation/ washing) of wound. *Panchavalkala* churna along with powder of *shukti* (shell) is advised to sprinkle on wound for healing by charaka.^[4]

Sushruta also mentioned herbs from *Nyagrodhaadi gana* (group), and *Kakolyaadi gana* for the treatment of *pitta* dominant wound in seven forms such as *kashaya*, *varti*, *kalka* etc.^[5]

In recent time many treatment modalities and medicines have emerged to reduce the incidence of wound infection and improve wound healing to certain limit. But drug resistance, hypersensitivity, high cost and difficulty in availability of these medicines are problems faced now a day. There is need to find alternative to overcome these problems. Ayurveda have many promising medicines to overcome this. Hence in present case study, *Panchavalkala* is selected for the treatment of dushta vrana.

The *vrana* is discontinuity or break of body tissue or part of body, which after repair leaves a scar for whole life.^[6]

According to Sushruta and Charak wound can involve *Twak* (skin), *mamsa* (muscle), *sira* (vessels), *snayu* (tendon), *asthi* (bone), *sandhi* (joints), *koshtha* (abdomen) and *marma* (vital parts). The wounds involving skin only are easy to treat, but it gets more and more difficult to treat if it involves further tissues like *mamsa*, *sira* and so on.^[7]

Healing of wound (*Vrana*) is a natural process which continues in a sequential manner till the formation of a healthy scar. A healthy wound heals faster than an infected wound.

Wound with no symptoms of vitiation of any *dosha*, having blackish edges, having granulation tissue, no pain and without any discharge is *shuddha vrana*,^[8] which can be correlated with healthy wound.

But due to the interference of vitiated *Doshas*, *Vrana* becomes *Dushta* and normal healing process gets delayed. This *dushta vrana* can be correlated to infected wound in modern medicine. *Dushta Vrana* (Non-healing ulcer) can cause various complications like sepsis, damage of organ and even death if not treated properly.

Following signs and symptoms of *Dushta vrana* are mentioned by Acharya Sushruta^[9]:

- *Dushta vrana* have very small or very wide opening,
- May be very hard or very soft in nature,
- May be elevated or depressed,
- Very cold or hot to touch,
- Black, red, yellow or white in colour,
- With foul smell,
- Containing / filled with pus, tissue, tendons,
- With pus discharge, or blood discharge,
- Not having straight tract inside or having track in upward direction,
- With severe pain, redness, itching,
- Oedema around wound

According to Acharya Charak, wound with foul smell, with different colour than skin, having excessive discharge and severe pain are *Dushtavrana* (infected wounds). Their treatment is to be done with *shodhan*.^[10]

Total 60 treatment protocols ((*Shashti Upakrama*)) are mentioned for treatment of wound by Acharya Sushrut like *Apatarpan*, *Aalepa*, *Parisheka* etc. Out of which *Kashaya* (*Decoction*), *Varti*, *Kalka*, *Ghrut*, *Taila*, *Rasakriya* and *Avachoorana* (sprinkling power of medicine on wound) are used for *Shodhan* (purification) and *Ropan* (healing) of wound.^[11]

In present study, *Panchavalkala* is selected for cleaning of wound (*parishek*) and topical application and internal administration for the treatment of *dushta Vrana*.

MATERIAL AND METHODS

Methods

Objectives

Current case study is aimed at investigating and confirmation of wound healing property of *Panchavalkala* in the management of *Dushta vrana*.

Case history

A 46 year old man farmer by profession, visited to OPD of surgery dept. of our institute with complaints of large yellowish wound on the dorsal aspect of right foot, associated with severe pain, oedema around it, pus discharge, slough and foul smell since last two months, which was not responding to treatment taken elsewhere.

Diagnosis: *Dushta vrana*.

PAST HISTORY

Patient had history of trauma to right foot during work in farm. The wound formed at that time was small but it was neglected by the patient. He didn't maintained proper hygiene, also not taken treatment promptly prescribed by local physician. During course of time that wound got infected. Patient then taken treatment for that outside but not relieved hence he visited our hospital with above complaints.

History of treatment: Taken modern medicine treatment from local family Physician.

Hetu

Trauma to foot during work at farm. Not maintained hygiene also not taken treatment properly. Also patient had taken *abhishyandi*, *katu rasapradhan* diet during this time.

Samprapti

Due to above etiological factors, *dosha* got vitiated at wound site and turned it into *Dushta vrana* (infected wound).

Chikitsa

As per Acharya Sushruta, *dushta vrana* requires both *shodhan* and *ropan* treatment. *Shodhan* alleviates vitiated *dosha* at wound and signs and symptoms present at wound due to *dosha*. *Ropan* promotes healing faster. As *Panchavalkala* formulation has both actions it was used for local treatment that is for cleaning of wound (*parishek*) with topical application and internal administration in this present study.

The wound was first washed and cleaned thoroughly with decoction (*kwath*) of *Panchavalkala*. After that a gauze soaked in this decoction was kept on wound and bandage was applied. Also decoction of *Panchavalkala* in a quantity of 20 ml. was given to patient internally thrice a day for entire treatment period.

Drug Review

The *matra*, *kala*, *anupan* and duration of treatment are summarized in table No.1. The details of ingredients, indications and mechanism of action of drugs are summarized in table No. 2.

Table 1: Drug information.

Sr. No.	Drug name	Matra	Anupan	Kala	Duration
1.	<i>Panchavalkala kwath</i>	20 ml	Lukewarm water	After meal TDS	30 Days
2.	<i>Panchavalkala kwath</i>	300 ml	For <i>parisheka</i> and bandage	OD	30 Days

Table 2: Drug information.

Sr. No.	Drug name	Latine name	Rasa – veerya - vipak	Guna	Karma (action)
1.	<i>Nyagrodh / Vat</i> ^[12]	<i>Ficus bengalensis</i> Linn.	<i>kashaya – Katu - sheeta</i>	<i>Guru, grahi, sheeta</i>	<i>Kapha-pittaghna, vranahara, varnya, useful in visarpa, daha, yonirog.</i>
2.	<i>Udumber</i> ^[13]	<i>Ficus glomerata</i> Roxb.	<i>Madhur, kashya – katu- sheeta</i>	<i>guru, ruksha, sheeta</i>	<i>Kapha-pitta-rakta dushtihara, varnya, vrana shodhan-ropan.</i>
3.	<i>Ashwattha</i> ^[14]	<i>Ficus religiosa</i> linn.	<i>kashaya-katu-Sheeta</i>	<i>guru, ruksha, sheeta,</i>	<i>Pitta-kapha-vrana-rakta dushtihara, varnya, yonishodhan.</i>
4.	<i>Plaksha</i> ^[15]	<i>Ficus infectoria</i>	<i>kashaya-katu-Sheeta</i>	<i>sheeta</i>	<i>Kapha-pitta-rakta dushtihara, useful in</i>

		<i>Roxb.</i>			<i>vrana, yonirog, daha, shotha, raktapitta.</i>
5.	<i>Parish</i> ^[16]	<i>Thespesia populnea</i>	<i>kashaya-katu-Sheeta</i>	<i>Guru, sheeta</i>	<i>Twakvikar, Krumi- kapha-shukra doshahar</i>

RESULTS

The clinical features of *Dushta Vrana* in this patient like severe pain, oedema around wound, pus discharge, slough and foul smell were improved by the end of 2nd week. The wound became *shuddha* and was healed completely at the end of 4th week leaving minimal scar. No signs of recurrence were noticed during a follow up for aperiod of 1 month.

Observations of signs and symptoms of disease were recorded in case paper every week. Result of treatment with follow up and improvement are summarized in table No.3.

Table 3: Results with follow up.

Sr.no.	Symptoms / signs	Day 0	Day 7	Day 14	Day 21	Day 28
1	Size Of Wound	5*3*1 cm	4*2.5*1 cm	3.5*2.5*0.5 cm	2*1*0.2 cm	Scar
2	Pain	++++	++	+	-	-
3	Oedema	++++	+++	+	-	-
4	Pus Discharge	++++	++	-	-	-
5	Slough	++++	++	-	-	-
6	Foul Smell	++++	+	-	-	-
7	Granulation tissue	-	+	++	+++	Healed
8	WBC Count	13000	9700	6500	6200	5700

DISCUSSION

Effect on Pain: Severe pain and tenderness was present at the beginning, which drastically reduced at the end of 2nd week and completely reduced at the end of 3 weeks of treatment.

Effect on colour: At the end of 2nd week, slough was completely reduced and floor was covered with red, healthy granulation tissue.

Effect on Srava (Discharge): Purulent discharge present at the beginning was completely reduced at the end of 2nd week.

Effect on smell: Foul smell which was present at the beginning of treatment was reduced by 75 % the end of 1st week and disappeared completely by the 2nd week.

Effect on size: At the end of the treatment, *Vrana* completely healed with minimal scar in 4 weeks.

Most of drugs in *panchavalkala* formulation are *kashaya rasa* dominant, having *katu vipaka*. These properties are useful for *vrana-shodhan*. Pain, pus discharge, foul smell and

discoloration in wound are due to *kapha-pitta* and *rakta dushti*. These drugs are mentioned *Kapha-pitta-rakta dushtihara*, *varnya* and *vrana shodhan-ropan*, hence are useful in the treatment of *Dushta vrana*. *Ruksha guna* have helped to reduce *kapha dosha* and in turn pus discharge. *Sheeta guna* have helped in reducing *pitta-rakta dushti*. *Kashaya rasa* dominance in *panchavalkala* helped to reduce the wound size by promoting healing and the rate of contraction of wound.

CONCLUSION

- Wound with no symptoms of vitiation of any *dosha* is *shuddha vrana*, which can be correlated with healthy wound.
- Not maintaining proper hygiene of wound and wrong dietary habits vitiates *dosha*.
- Due to the interference of vitiated *Doshas*, *Vrana* becomes *Dushta* and normal healing process gets delayed. This *dushta vrana* can be correlated to infected wound in modern medicine.
- *Vranashodhan* and *Ropan* are main treatment for *Dushta vrana*.
- As *Panchavalkala* have both these properties, are found very useful for the treatment of *Dushta vrana*. Wound healing fastened with *Panchavalkala* which can be used locally and internally.
- No ill effects due to *Panchavalkala* were found during this study. Thus *Panchavalkala* can be used in treatment of *shuddha* as well as *Dushta vrana* with better acceptance.
- It is easily available and cost effective.

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