

EFFICACY OF LOCAL APPLICATION OF KHANDUCHAKKA (*EHRETIALAEVISROXB*) GHRITA IN DUSHTAVRANA - A CASE REPORT

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ABSTRACT

Various medicinal plants have been described in traditional medicinal practice. Traditionally *Khanduchakka* (*Ehretialaervis*) is also commonly used plant in rural area of Wardha district for the treatment of chronic ulcers and fractures in animals. *Khanduchakka* (*Ehretialaervis*) is a medicinally important plant belonging to family *Boraginaceae*. Several factors affect the normal process of wound healing. In the present study, an attempt was made to develop simple and effective treatment modality for wounds that are not responding to conventional treatment modalities by using *Khanduchakkaghrita* {Medicated *ghee* prepared with leaves of *Khanduchakka* (*Ehretialaervis*)} as external wound dressing material. A case of 50 year – old man, who presented with complaints of *Dushtavrana* (non healing wound) on the dorsum of the right foot, was treated by the application of *Khanduchakkaghrita*. The result of the treatment is shown in this case. This case study explains the role of *khanduchakkaghrita* in *Dushtavrana*.

Key words: *Dushtavrana*, *Khanduchakka ghrita*

INTRODUCTION

The word *Vrana* is derived from *DhatuVru-vrunoti, vrunute. Vrut-varayat-khadayat-aacchadayat*, it means to cover, to conceal and to envelope respectively. A pathology in which there is consumption (destruction) of body tissue and formation of scar after healing that remains for a lifetime is called as a *Vrana*. Definition of *Vrana* according to *Sushruta* is very broad. Formations of scar after tissue destruction can be either due to extrinsic factor (wound) or it can be due to intrinsic aetiology (ulcer). As the scar of wound never disappears even after complete healing and its imprint persisting life long, it is called as *Vrana*. As it causes destruction of the tissue or damage of body part, so it is termed as *Vrana*^[1].

Dushtavrana:

Sites of *Vrana* are termed as *Vranavastu* or *Vranaadhishtana* in *Ayurveda*. These are mainly on the basis of involvement of body structures which are categorized mainly under eight sites viz- *Twaka* (skin), *Mamsa* (muscle), *Sira* (vessels), *Snayu* (ligaments), *Asthi* (bones), *Sandhi* (joints), *Koshta* (abdominal and thoracic viscera), and *Marma* (some vital parts of the body like brain)^[2].

Vrana which has foul smell, continuously flowing putrefied pus along with blood, with cavity, since long time and has smell etc, *Vranalakshanas* are high in intensity, and which is almost opposite to *ShuddhaVrana* is *Dushtavrana*. *Samruta*-Narrow mouthed, *Kathina*-

Hard, Avasanna- Depressed, Vedonarvan- Severe pain, Vivruta-Wide mouthed, Ushna-Hot, Daha-Burning sensation at the site, Paka-Suppuration, Raga- Redness, Puyasavya- Discharging pus, Manojnadarshana- With ugly sight, Kanduk-Itching, Shopha- Swelling, Pidaka-With boils, Mrudu- Soft, Bhairava-Frightful, Putimamsasirasnayu- Full of pus, muscles, vessels, ligament these are the symptoms of *Dusthavrana*^[3,4].

Stages of Vrana

Shuddhaawastha (stage of granulation tissue)

Dushtaawastha (stage of inflammation)

Ruhyamanaawastha (stage of maturation and remodeling)

Rudhaawastha (stage of contraction)

1) *ShuddhaVrana*: The *Vrana* that is free from three vitiated *doshas* or any complications, has blackish-white margins due to pure blood supply, granulation tissue at surface level, and without any pain or discharge is said to be *ShuddhaVrana*^[5].

2) *DushtaVrana*: The word *Dushta* literally means bad, wicked, offensive, and culpable. *Vrana* in which vitiation of all *doshas* causes chronicity of *Vrana* presenting with features like excessive exudates, foul smell, signs of inflammation etc. In other words, *Vrana* not showing features of *ShuddhaVrana* (clean wound) is called as *DushtaVrana*^[6].

3) *RuhyamanaVrana*: The *Vrana* with pigeon colored (grey) margin without any exudates and showing partial layer of skin epithelium (*shveta* called as *chamacheli* or *chipitika*) are called as *RuhyamanaVrana*^[7].

4) *RudhaVrana*: The *Vrana* whose floor has healed completely, which is not indurated or swollen or painful, and is of same color and level of skin is said to be *RudhaVrana*^[8].

While there are few Indian studies on the epidemiology of chronic wounds, one study estimated the prevalence at 4.5 per 1000 population^[9].



Khanduchakka plant

Material and Method

Material:-

In Ayurvedic literature, uses of this plant are for *Prameha* (Diabetics) and *Vishaghna* (Anti-venom) (Su.Chi 11/10, Su.Kal.5/46, and Cha.Chi.23/66)^[10, 11, and 12]

Khanduchakka (*Ehretialaevis*)

1. *Ehretialaevis* Roxb. Var. *aspera* (Willd.) C.B. Clarke.
2. Species. *Aspera* Willd, *E.obtusifolia* Hochst .ex DC
3. Family – Boraginaceous (Borage family)
4. Habitat– Throughout India, also grown along roadsides.

Siddha/Tamil _ Addula.

Folk name _ Chamror (Punjab). Datarangi (Maharashtra.) khanduchakka (Wardha)

Chemical composition:- Phenolic acids, Flavonoids, Benzoquinones, Cyanogenetic Glycosides, fatty acids, Benzoquinones -34 1, 4-naphthoquinone lewisone, Bauerenol Bauerenol acetate, -amyrin, Betulin, Lupeol, Betulinic acid^[13].

Standardization, authentication of the *Khanduchakkapatra* will be done by the department of *dravyaguna* MGACH&RC.

Preparation of drugs:- Fresh leaves of Plants were collected from Pavanar village near to Wardha. *Ghrita* was prepared in *Rasa Shala* of MGACH&RC under supervision of

Subject expert^[14].



Khanduchakka ghrita

Case History

50 years old male residence of Dahegaon village, District Wardha was attended Shalya OPD on 16/07/2015 presenting complaints - non-healing wound over the dorsum of left foot since 2 months. He took treatment from local Doctor but not cured. Taking past history for wound patient told that he was known case of varicose veins on both legs for that he was on seating's of *jaloukavacharan* after some days on the bite of *jalouka* wound arised on left lower limb. So he came to M.G.A.C.H&RC, Salod. No history of DM, HTN or any other major disorder.

On examination

Position of the wound- over the dorsum of the left foot

Inspection - Wound size about - 2.5 x 2.5 cm

Shape - Irregular

Position - over the dorsum of left foot

Floor - Covered with slough

Margins - Oedematous

Discharge - Seropurulent with foul smell

Bleeding - Is wound bleeds on touch? - No

Edge - slopping

Dorsalis pedis artery pulsation present

Surrounding skin is eczematous and pigmented

Presence of varicose vein on both legs.

Tenderness was also present with surrounding indurations and local rise in temperature. Local lymph nodes were not involved.

Investigations

HIV - Non reactive

HBsAg - Non reactive

Haematological investigations: TLC-5400 /cumm

DLC - Neutrophils- 83%

Lymphocytes -13%

Eosinophil -03%

Monocytes -01%

Hb%-12.3gm

ESR- 13mm/hr.

Blood sugar random- 116 mg/dl

Color Doppler Venous Lower Limb LT -

Lower limb venous Doppler study reveals- Varicosity of great and saphenous vein in left lower limb with sapheno-femoral junction incompetency.

Diagnosis - *Dushtavrana*

Treatment

Every morning the wound was clean by normal saline. After cleaning, *Khanduchakka ghrita* was locally applied in adequate quantity with the help of spatula. Dressing was done with the sterile gauze and loose bandage. All these procedures were performed while wearing a sterile glove. Daily assessment of *vrana* will be done.

Observation

Colour of wound changed after 5 days. Discharge reduced after 10 days. Slough was reduced gradually. The clinical features of *dushtavrana* were improved and the wound get healed gradually at the end of 3rd week leaving only a minimal scar. With a follow up for a period of 2 months, the patient has shown no signs of recurrence.

1st day photograph



5th day photograph



9th day photograph



15th day photo



21st day photograph



DISCUSSION

Effect of treatment on sraava: The vitiated *pitta* is responsible for *pakakriya*, which by vitiating the *rakta* forms *pooya*. The *khanduchakkaghrita* helps in elimination of vitiated *pitta* from the body and thus controls upon the *pakakriya*, which results in the subsidence of *sraava*. Absence of *sraava* (pus) suggestive of the wound is devoid of infection.

Effect of treatment on Granulation tissue: *Khanduchakkaghrita* helps in removing the impurities which results in formation of healthy granulation tissue.

Effect of treatment on Size of the wound: The *Khanduchakkaghrita* undertaken has

helped for proper perfusion (Circulation) to the wound and hence accelerated the wound healing process. Thus it resulted in the reduction of size of the *dushtavrana*.

CONCLUSION

From the above Discussion it can be concluded that *Khanduchakkaghrita* acts through systemic correction and regulation of *Doshas*, which are responsible for the development of *Dushtavrana*.

Khanduchakkaghrita accelerates the wound healing process thus it resulted in the reduction of size of the *dushtavrana*.

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Laboratory : ULTRASONOGRAPHY

Patient ID : 201503113831 Patient Type : OPD
Name : Rajeshwar Jagannath Ugemuge Scan Date : 4-Nov-2015
Age/Gender : 56 Years/Male Accession No : 181520150021320
Department : SURGERYUNIT 3

COLOR DOPPLER VENOUS LOWER LIMB LT

Finding:
Deep veins of lower limb:
Evidence of sapheno femoral junction incompetency.
Common femoral , Superficial femoral, Deep femoral , Popliteal , anterior tibial , Posterial tibial and peroneal veins show good lumen, normal color flow.

Superficial veins of lower limb:
Evidence of dilated and tortuous great saphenous vein in left thigh (6.7 mm) and left leg (4.7 mm) and short saphenous vein (4.1 mm).

Impression:
Lower limb venous doppler study reveals
- Varicosity of great and short saphenous vein in left lower limb with sapheno-femoral junction incompetency.

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