



CLINICAL EFFICACY OF *PANCHVALKALADYA CHURNA & KASHAYA* (LOTION) IN THE MANAGEMENT OF NON- HEALING WOUND

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ABSTRACT

Particularly as a result of novel therapeutic strategies, the science of wound healing is developing quickly. Different herbal ointments have a powerful wound-healing effect and are widely used today. **Aim:** To establish the efficacy of *Panchvalkaladya kshaya (lotion)* in the formation of wound beds for the management of wounds. **Methodology:** Fine powder of the necessary plant part of the *Panchvalkadya Yoga* (in the same ratio or amount). Then, boil it on the lowest setting until just one fourth of the water is left after adding 16 times the entire amount of water. After that, use a filter to filter it. *Kashaya* is ready as a result. Patients with infected chronic non-healing wounds received treatment using this. Before and during the duration of treatment, infection symptoms and indicators were rated. **Results:** In the current clinical trial, a 65.03% overall symptomatic improvement was seen. Therefore, it can be said that this research found a significant or sufficient amount of relief.

Conclusion: The majority of cases showed a gradual decrease in the microbial load throughout the course of treatment, showing the formulation's effectiveness in lowering the microbial load and hence limiting infection and promoting wound healing.

Keywords: *Vrana, Panchvalkaladya, Kashaya, Wound*

INTRODUCTION

The three major Ayurvedic treatises, Charaka Samhita^[1], Sushruta Samhita^[2] and Astanga Sangraha^[3] have eloquently expounded on the formal descriptions of wound treatment in the Indian context. These documents give a systematic taxonomy of *Vrana* (different forms of wounds), as well as their management, it includes a variety of local and systemic medications and preparations. In 1000 BC, Sushruta, the pioneer of Indian surgery, developed the idea of *Vrana*. He provided a thorough explanation of a number of different wound forms as well

as a descriptive etiopathogenesis and therapy of wounds. He employed several herbal medicines as a local application for treating wounds and reported sixty different wound treatment techniques^[4]. His methods can be generically categorized as *Vrana Ropana* and *Vrana Shodhana*. Under these headings, he promoted the external application of numerous medications. One of them is the *Panchavalkaldya Churna*^[5] described in *Chakradutta*. *Panchavalkaladya Yoga* contains i.e. group of barks of six trees – *Vata* (*Ficus bengalensis* L.), *Ashwatha* (*Ficus religiosa* L.), *Udumbara* (*Ficus glomerata* Roxb.), *Plaksha* (*Ficus lacor*), *Parish* (*Thespesia populenea*), *Lodhra* (*Symplocos racemosa*) is used externally in a variety of ways and is particularly successful at controlling wound infection, which suggests that it also has an effect on *Vrana Shodhana*. In order to demonstrate the effectiveness of *Panchavalkaladya Lotion & Churna* on *Vrana Shodhana*, the influence of *Panchavalkaladya Lotion* over wound debridement was calculated in the current study.

Redness (erythema), warmth, swelling, discomfort, and loss of function are clinical features of wound. This could come with pus and a foul smell. Eventually, the amount of germs in the area will rise and spread throughout the body, causing sepsis, which, if not promptly treated, might lead to septicemia and multi-organ failure.^[6]

METHOD OF PREPARATION PANCHVALKALADYA SHODHANA KASHAYA –

As per *Acharya Sharangdhara*, first make *Kapadchhan* powder of the required plant part (in same ratio or equal amount) of the *Vata* (*Ficus bengalensis* L.), *Ashwatha* (*Ficus religiosa* L.), *Udumbara* (*Ficus glomerata* Roxb.), *Plaksha* (*Ficus lacor*), *Parish* (*Thespesia populenea*), *Lodhra* (*Symplocos racemosa*). Then add 16 times of water of total quantity of water then boil it on minimum till water remain one forth. Then filter it with the help of filter. Thus, *Kashaya* is prepared.

MATERIALS AND METHODS

This study was approved by Institutional Ethical Committee (IEC) DSRRAU, Jodhpur vide letter no. Sr.No./DSRRAU/UCA/IEC/20-21/373 on dated 12/06/2022. Before starting the clinical trial, this study was also registered under CTRI (Clinical Trial Registry of India). [CTRI No. - CTRI/2022/09/046082 [Registered on: 30/09/2022].

INCLUSION CRITERIA

Patient who had classical sign and symptom of *Dusta Vrana* (Chronic non healing wound) were included in the trial. A predesigned written consent form was taken from all patients before starting clinical trial.

EXCLUSION CRITERIA

Patient who is not eligible for *Shodhana* of *Vrana* according features mentioned in to *Sushruta Samhita*. Patient suffering from any malignancy, tuberculosis, HIV & Hepatitis B, any major systemic disorder, wounds like tubercular wound, leprotic wound, malignant wound, diabetic wound, burns, wounds having excessive loss of tissues, etc. were excluded from the study.

ADMINISTRATION OF DRUG

After examination and preparation of 40 well diagnosed and confirmed patients of Non-healing wound, wound area was gently wash and clean the *Vrana* with *Panchvalkaladya kshaya* (lotion) & *Panchvalkala Churna* was sprinkled over the wound area for healing.

ASSESSMENT CRITERIA

The improvement in clinical symptomatology of the patients such as pain, swelling, burning sensation, itching & bates-jensen wound assessment tool scoring system was assessed in the present study.

OBSERVATIONS

❖ 40 patients of *Dushta Vrana* (Non-healing wound) were enrolled, in which maximum 12 patients were lie in age group of 51-60 years (30%), 67.5% were Male, 100% were Hindu, 32.5% had secondary education level, 50% had middle socio-economic status, 40% had private job, 55% were from rural area and 92.5% Married.

❖ *Dashavidha Pariksha* shows that maximum numbers of the patients were having *Manda agni* (62.5%), *Kroora Kostha* (45%) *Vata-Pitta Deha Prakriti* (45%), *Rajasika Mansika Prakriti* (52.5%), *Madhyama Satva* (55%), *Mamsa Sara* (57.5%), *Madhyama Satmaya* (58.13%), *Madhyama Samhanana* (52.5%) *Avara Vyayama Shakti* (62.5%), *Madhyama Abhyavaharana Shakti* (60%) and *Avara Jarana Shakti* (62.5%).

❖ Chief complaints observed in patients were in 40 registered patients of *Dushta Vrana* (Non-healing wound); Pain was found in all 40 patients (100%), Swelling was found in 36 patients (90%), Burning sensation was found in 31 patients (77.5%), Itching was found in 28 patients (70%).

EFFECT OF THERAPY

In the present study *Panchvalkaladya Kashaya* and *Churna* relives Pain (78.87%), Swelling (71.62%), Burning sensation (70.45%), Itching (72.72%), Wound Size (70.68%), Wound Depth (73.52%), Wound Edges (67.04%), Wound Under mining (67.16%), Exudate Type (68.18%), Exudate Amount (67.01%), Skin color Surrounding Wound (65.90%), Peripheral Tissue edema (63.07%), Peripheral Tissue Induration (61.53%), Granulation Tissue (64.06%), Epithelialization (67.70%). Overall symptomatic relief observed, **65.03%** relief was observed in present clinical trial. Therefore, it could be specifying that satisfactory relief was found during this clinical trial.



Fig. No. 1.1: Shows gradual changes in healing process of wound by the application of *Panchvalkaldya Churna* and *Kwatha*

DISCUSSION

Pain

Considering the mode of action by the *Rasa*, *Panchavalkaladya Kashaya* must have been *Vatahara* and hence increase the *Ruja* (pain) which is predominantly due to *Vata*. However, the drug's impact on *Ruja* is shown to be very considerable. This can be the result of the *Guna's* (Property's) behavior. Given that it is intended to be *Vatahara* and has *Guru* (heavy) *Guna*, the *Ruja* may have reduced.^[7]

Swelling

Due to the *Kashaya Rasa* of the medicine, *Panchavalkaladya Churna*, which is regarded as an excellent *Shothahara* (that which minimizes swelling), acts with the properties of *Peedana* (act of squeezing), *Ropana* (heal), and *Shodhana* (curative action). These characteristics cause it to either eliminate or liquefy the collected chemicals, which reduces swelling. The substance is also known as *Kaphahara* and *Rooksha* (dry). Due of this, *Shopha*, a *Kaphaja*, is diminished. Additionally, the debridement of the slough will be made easier by *Kashaya Rasa's* *Lekhana* (scraping), *Kledahara* (arresting Dampness), *Chedana* (destroying/removing), and *Raktashodhaka* (blood purifier) properties^[8].

Itching

In this present study the discharge was reduced due to *Stambhana* and *Shoshana* property of *Panchavalkaladya Yoga*. So *Kandu* get reduced. *Kandu* is associated with *Kapha*, *Kashaya Rasa* and *Panchavalkaladya Yoga* have *Kaphaghna* property so *Kandu* (Itching) reduced. Itching in wound occur due to histamine and prostaglandin activity. Because of anti-inflammatory property of *Panchavalkaladya Yoga*, inhibition of histamine and prostaglandins synthesis occurred hence itching was reduced.

Burning sensation: This may be due to *Shophahara* i.e. reducing oedema, *Dahahara* i.e. reduces burning pain properties of *Panchavalkaladya Yoga*, these properties helps to reduce inflammation in *Vrana*. *Kashaya Rasa* is dominating *rasa* in *Panchavalkala*. *Kashaya Rasa* is *Rakta* and *Pitta Shamak* so it reduces daha. As per recent researches done on *Panchavalkala* it has anti-inflammatory activity^[8].

PHARMACEUTICAL ACTION OF TRIAL DRUG

Panchavalkala have *Raktashodhaka* and *Raktapitta Prashamana* properties hence *Suddha Vrana* was not converted into *Dushta Vrana*. It must be noted that in spite of oily nature of formulation *vrana* does not get contaminated. *Panchavalkala* have *Kashaya Rasa* (Astringent) which helps to reduce *Vranasrava*. As well as *Kashayarasa* have *Stambhan* and *Kledopashoshana* property. *Rukshaguna* and *Katuvipaka* of *Panchvalkala* helps to reduced *Srava* in the *Vrana*^[9-10]. The *Stambhana* effect also be accredited to the cold in potency (*Sheeta Veerya*) of the drug. In this present study the *srava* in maximum patient was serosanguinous in nature, because of *Stambhana Guna* the blood vessels get sealed and so *strava* was reduced. Serous discharge was also reduced due to its *Kashaya Guna* and anti-inflammatory activity. *Panchavalkaladya* has anti-inflammatory property as well as antibacterial property so the discharge from wound gets reduced.

Antioxidants shield the tissue from oxidative injury because the oxidation process slows wound healing. It has been demonstrated that the flavonoid-rich portion of the bark of *Pareesha*, *Vata*, *Ashwatha*, and *Plaksha* possesses strong in vitro antioxidant properties. Because tannins, phytosterols, and flavonoids have anti-inflammatory properties, they stop the initial phase from extending. Additionally, they lessen the symptoms of pain, soreness, redness, and swelling, which aids in infection control.^[11] Tannins and phytosterols encourage wound contraction and enhanced capillary development, which speed up the healing process. According to reports, tannins have the ability to boost collagen levels, which is one of the components that promote wound healing.^[12] Vitamins A and K are crucial for developing epithelialization, which aids in healing.

CONCLUSION

From this study this can be concluded that *Panchavalkaladya Kashaya & Churna* efficiently decreases the infection, hastens wound debridement and can be recommended in the management of chronic non healing wounds.

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