

**ROLE OF JALAUKAVACHARAN (LEECH THERAPY) AND  
PANCHAVALKALA KWATH DHAWAN IN THE MANAGEMENT OF  
CHRONIC NON HEALING WOUND (DUSHTA VRANA)**

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**ABSTRACT**

A chronic non healing wound is a wound that does not heal in an orderly set of stages and in a predictable amount of time or wounds that do not heal within three months are often considered chronic. Chronic wounds often remain in the inflammatory stage for too long and may never heal or may take years. Many wounds pose no challenge to the body's innate ability to heal; some wounds, however, may not heal easily either because of the severity of the wounds themselves or because of the poor state of health of the individual. In advance era technology related to wound healing is developing rapidly. Especially in therapeutically way new techniques are involved in wound disloughing (vrana shodhana) and wound healing (vrana ropana). Many researches has done on

therapeutic aspect of wound healing along with ayurvedic remedies. It shows that herbal medicine and leech therapy have enormous effect on wound healing. Panchavalkala Kashaya dhawan and jalaukavacharan is one of them.

**KEYWORDS:** Jalaukavacharan, panchavalkala kwath dhawan, chronic non healing wound, dushta vrana,

## INTRODUCTION

Man, the superior most of all the species is always remaining in search of One Prime Goal: The perfect health. From Vedic era to this age, all the researches have been directed by the eminent scholars to achieve the same. Wounds have always a big challenge to the medical profession. Normally wounds are healed by primary or secondary intention but some wound are turns to chronic non healing wounds.

*Shalya Tantra* is one of the important branch of Ayurveda in which surgical and Para surgical techniques has described for management of various diseases. *Vrana* (wound) is one of them which have been managed by human being from starting of civilization. Under the circumstances the first thing which the men came across was the injury from different sources which caused him the *Vrana* (wound). *Vrana* was seen as debilitating and scaring disorder usually seen affecting the human being at any age. *Vrana* is the most important and widely described chapter of *Shalya Tantra*.

There are many factors that effect on wound healing process, like nutrition deficiency, site of wound, certain drugs and bacterial infection. Wound infection is defined as presence of replicating micro-organism within a wound with the subsequent host response which ultimately leads to delayed wound healing which is known as 'Dushtavrana'.

Because of above reason it is important that infection is recognised as early as possible. Symptoms of local infections are pain, slough, discharge, granulation and swelling.

Sixty different procedure for the management of wound along with herbal drugs which he has used for local application have been mentioned. His techniques are broadly classified as 'Vranashodhana' and 'Vrana ropana.' Sushruta has described various drugs for external application.

One of them Nyagrodhadi varga mentioned in Vranaropan Kashaya which includes panchavalkala which is group of bark of five trees -Vata(Ficus Bengalensis), Ashwatha(Ficus religiosa), Udumbara (Ficus glomerata), Plaksha(Ficus lacor Buch -Ham), Parish (Thespesia populenea soland ex corea.) is found very effective in wound healing due to its vrana shodhana and vrana ropana property.

**Role of Jalaukavacharan in wound management-** Jalaukavacharan (leech application) is one of important *anushastrakarma* illustrated by many authors.

*Jalaukavacharana* is a method of *Raktamokshana* (blood-letting). *Raktamokshana* have two methods- *shastrakrita* and *ashastrakrita*. *Shastrakrita* further have two methods- *siravedha* and *pracchana*.

*Ashastrakrita* having *shringa*, *jalauka*, *alabu* and *ghati*. *Jalaukavacharan* is generally applied in initial phase of wound progress.

*Rakta mokshana* reduces the pain and suppress the inflammatory process. Wound with inflammation, hardness, slough, reddish black in colour, tenderness and uneven surface are treated by *rakta mokshana*.

Inflammation with poisonous in origin is specially treated by *Jalaukavacharan*

### **Components of Leech (*Hirudo medicinalis*) saliva & their role**

**Hirudin**- Inhibits blood coagulation by binding through thrombin & bactericidal also

**Calin**- Inhibits collagen mediated Platelet aggregation.

**Hirustasin** – Inhibits trypsin & chymotrypsin

**Acetylcholine** – Vasodilator.

**Histamine like substance**- Vasodilator, increases the inflow of blood at the bite site.

**Hyaluronidase** – that enhances the viscosity of the interstitial fluid for vasodilation effect.

**Aesthetics substances**- Anaesthetic action.

### **CASE STUDY REPORT**

#### **Aim & objectives of case study**

To study role of *Jalaukavacharan* in chronic non healing wound.

TO study role of panchavalkala kwath dhawan in chronic non healing wound

#### **Objective**

To study probable mechanism of combine action of *Jalaukavacharan* & panchavalkala kashaya over wound debridement (*vrana shodhana*) and wound healing (*vrana ropana*).

To propose an alternative, cost effective, easily available herbal preparation in management of *dustha vrana*.

#### **Type of study**

Observational single case design without control group

**Study centre**

M.A podar medical (Ayu) college and hospital worli mumbai -18.

(IPD patient)

**Duration of treatment**

29 January 2018 to 2 march 2018 (approx. 1 month)

**STUDY DETAILS**

Age-32 years      Gender-Male      Religion-Hindu

Occupation - farmer      Diet – NonVegetarian

**Chief complaints**

Non healing wound over right ankle region at lateral aspect of right foot with seropurulent discharge slough foul smell pain & swelling (all complaints since 3 month.)

**Brief history**

A 32 yrs male patient having chronic non healing wound on right ankle region at lateral aspect of right foot with seropurulent discharge slough ,foul smell, pain & swelling since 3 month. History of burn by metal over right ankle region lateral aspect of right foot 3 month back. Patient had already taken treatment by allopathic consultants but failed to get relief regarding wound healing. . So he came for Ayurvedic treatment. All vital parameters were normal limits Patient haemodynamically stable.

**Lab Reports**

HB % - 12.8 gm%.	Sr. Urea- 17 mg/dl	HbSAg - Non reactive
WBC - 10,300 /Cumm,	Sr.Creatinine- 0.8mg/dl	HIV 1&2 -Non reactive
BSL - R. - 107 mg%	Urine – NAD.	
pp - 138 mg%		

**Local examinations**

Site- right ankle region over lateral aspect of right foot

Shape-Irregular

Edge-Rough, irregular, fibroused tissue.

Floor-unhealthy with less granulation tissue and slough.

Discharge-seropurulent discharge which needs daily dressing.

State of vrana – Dushta vrana.

Number of vrana - 2 in number

- 1) Wound seen over right ankle region measuring 5×1×0.25 cm
- 2) Wound seen over lateral aspect of right foot measuring 4×1×0.5cm

### **Treatment Plan**

After the assessment wound daily panchavalkala kwath dhawan done for 1 month and one leeches were applied over the each wound. when leeches left the site by their own wound was cleaned. This is followed by dressing done with bandaging was wrapped around wound. Dressing was done on every day, where as leech therapy was repeated weekly for four settings. Patient was advised some Ayurvedic oral medicines as described in materials & methods.

## **MATERIALS AND METHODS**

### **Medicines used for dressing**

Panchavalkala kwath dhawan done daily.

**Jalaukavacharan** done weekly for 4 weeks single jalauka applied each time on each wound.

### **Medicines given orally**

Chandraprabhavati - 4 Rasayankali,

Gandhakrasayan - 2 Apankali,

## **DISSCUSSION**

Non-Healing Wound is a common problem that causes substantial morbidity in persons who are otherwise healthy. It is one in which patient experiences swelling, discharge, Slough and sometime pain. In Ayurvedic classics the disease Non-Healing Wound is compared with Dushta Vrana which has similar clinical features with Non-healing Wound. Panchavalkala Kashaya found good solution for vranaropana and vranashodhana.

### **Effect of panchvalkala Kashaya dhawana and leech therapy are.**

**Pain-:** Kashaya rasa is vatakara in nature but panchvalkala kwath dhawan reduces pain. this is might be action of Guna. Having Guru guna is supposed to be vatahara in nature.

**Discharge-:** Kashaya rasa of drava having property like stambhaka help in reducing discharge. stambhaka guna may be due to sheet virya of drugs.

**De sloughing action:-** Atitwak prasadka property of dravya helps in reducing bacterial load and ultimately leads to healthy granulation which helps in healing wound rapidly.

**Leech (*Hirudo medicinalis*) saliva & their role**

**Hirudin**- Inhibits blood coagulation by binding through thrombin & bacteriacidal also

**Calin**- Inhibits collagen mediated Platelet aggregation.

**Hirustasin** – Inhibits trypsin & chymotrypsin

**Acetylcholine** – Vasodilator.

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**Anesthetics substances**- Anesthetic action.

**OBSERVATIONS AND RESULTS**

When we started Ayurvedic Medicine & Jalaukavacharan, panchavalkala kwath dhawan wound responds very well and healing process started.

**Gradation criteria for assessment of ulcer**

Parameters for assessment	0	+	++	+++
size	No discontinuity of skin	1/4 <sup>th</sup> Previous area of ulcer	1/2 <sup>th</sup> Previous area of ulcer	>1/2 <sup>th</sup> Previous area of ulcer
Pain	No	Localized pain during movement	Localized pain during rest	Localized pain during rest towards the calf muscles
Discharge	NO	occasionally	Discharge needs daily dressing	Profuse discharge
Smell	NO	Bad smell	Unpleasant smell	Foul smell
Induration	No	localised	Wound + edges	Wound & towards calf muscles
Floor	Smooth irregular with granulation Tissue	Healthy, regular, Less granulation tissue	unhealthy, less granulation tissue	Unhealthy, no granulation tissue

**Case study**

**Fig.1 (Before treatment).**





**Fig .2 (panchavalkal kwath dhan and leech application 1<sup>st</sup> week)**



**Fig .3 ((panchavalkal kwath dhan and leech application 2<sup>nd</sup> week)**



**Fig .4 ((panchavalkal kwath dhan and leech application 3<sup>rd</sup> week).**



**Fig .5 ((panchavalkal kwath dhwan and leech application 4<sup>th</sup> week).**



**Fig .6 (after 4<sup>th</sup> week healthy granulation tissue)**

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