

## Clinical evaluation of panchavalkal kashay dhavan In the management of diabetic wound

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### Abstract:

The ingredients of *Panchavalkala* has the properties of *kaphavatahara* and also *varnya* and *vranaropana*, *rakta shodhaka* properties hence by administering these drugs in the form of *Kashaya*, it will clear the ducts and also does the *varna prasada*. The drugs in this *Kashaya* are also having anti inflammatory effect, thus help in treating diabetic wound. Because *Panchavalkala Kashaya* seems to have property like *Vranaprakshalana*, *Vranaropana* and *Shothahara*.

Preventing secondary infections in the **Diabetic Wounds** with safe and

efficacious anti bacterial agents is must in the current scenario to enhance the wound healing process. *Panchavalkala* has activities like *vranaprakshalana*, *vranaropana*, *shothahara*, *upadanshahara*, *visarpahara*.

Study revealed that *Panchavalkala kwatha* is *kapha shamaka*, *stambhaka* and having the properties like astringent, antiseptic (*kashaya rasa*) and wound healing (*vranaropana*). Because of these properties it helps in increasing local cell immunity and prevents recurrence of symptoms in patients

**Keywords:** *Panchavalkala kwath*, Diabetic wound, *Prameh Pidaka*, *Vranaprakshalana*, *Vranaropana* and *Shothahara*

## Introduction

*Ayurveda*, the first organized system of medicine, ever evolved throughout the globe, is not mere a system dealing with healing techniques and curing diseases. It is indeed a codified science which issues definite guidelines for healthy, peaceful and happy living and maintenance and protection of physical and psychological health, with an object of achieving longevity. The system has been primarily developed with two basic objectives viz. maintenance of health and prevention of disease in a healthy individual and eradication of diseases in diseased. An attempt has been made to screen classical literature for the herbs with cleansing properties and found that, **Pancha Valkala**<sup>[1]</sup> the barks of five milk-yielding trees has activities like *vrana prakshalana*, *vrana ropana*, *shothahara*, *upadanshahara* *visarpahara*. **Pancha Valkala**<sup>[2]</sup> is the combination of barks of five different plants viz. Vata (*Ficus bengalensis* Linn.), Udumbara (*Ficus glomerata* Roxb.), Ashwattha (*Ficus religiosa* Linn.), Parisha (*Thespesia populnea* Soland. ex Correa.), Plaksha (*Ficus lecor* Buch. Ham.)<sup>[3]</sup>

## MATERIALS AND METHODS

### Detail Plan and Protocol -

**Centre of Study:** Post Graduate Department of Shalya Tantra,

M.A. Podar Hospital, Worli, Mumbai.

**No. of Patients:** 10

**DURATION OF TRETMENT:** 6 weeks

**Raw Material:** Barks of Panchavalkala were procured from reputed pharmacy in Mumbai. Coarse powder of the drugs were made and used for the preparation of the Quath (Decoction).

**Formulations :** *Panchavalkala kwatha* was prepared by following classical guidelines in Dept. of Surgery, M.A.Podar Hospital, Worli.

### **METHOD OF PREPARATION OF KASHAYA (DECOCTION) :**

Coarse powder of *Panchavalkala* were prepared and soaked in 8 times of water for overnight. Next day it was subjected to heat with continuous stirring and the quantity was reduced to 1/4th of the initial volume. The liquid was filtered through four folded clean cotton cloth and the filtrate was collected as *Kwatha*.

Composition of *Panchavalkaladi Kwatha*

| Drugs     | Latin Names                | Part used | Proportion               |
|-----------|----------------------------|-----------|--------------------------|
| Vata      | <i>Ficus bengalensis</i> L | Bark      | 70g                      |
| Udumbara  | <i>Ficus glomerata</i>     | Bark      | 70g                      |
| Ashwattha | <i>Ficus religiosa</i>     | Bark      | 70g                      |
| Parisha   | <i>Thespesia populnea</i>  | Bark      | 70g                      |
| Plaksha   | <i>Ficus lecor</i> Buch.   | Bark      | 70g                      |
| Water     | --                         | --        | 8 times Reduced to 1/4th |

## INCLUSION CRITERIA :

- 1) Patients suffering from Diabetes Mellitus with Diabetic wounds.
- 2) Patients of both sexes male & female.

## EXCLUSION CRITERIA :

- 1) Patients suffering from Diabetes Incipidus.
- 2) HIV Positive Patients.
- 3) Hepatitis B Positive Patients.
- 4) Patients suffering from Peripheral Arterial Disease.
- 5) Patients suffering from Peripheral Venous Disease.
- 6) Uncontrolled Diabetes.
- 7) Complicated wound like Osteomyelitis, Gangrene etc.

## CRITERIA FOR ASSESSMENT:

### 1. SLOUGH:

- Absent -0
- Slough covered upto 25% of wound -2
- Slough covered upto 25-50% of wound -3
- Slough covered upto 50-75% of wound -4

### 2. DISCHARGE:

- Absent -0
- Serous sanguineous -1
- Serous -2
- Purulent -3

Purulent discharge with foul smelling -4

### 3. SWELLING:

- No Swelling -0
- Mild Swelling <2cm -1
- Moderate Swelling 2-5cm -2
- Severe Swelling >5 cm -3
- Inflamed margin -4

### 4. GRANULATION TISSUE:

- Healthy granulation tissue -0
- 75% wound covered with granulation -1
- 50% wound covered with granulation -2
- Unhealthy granulation with slough -3
- Granulation Absent -4

### 5. SIZE:

- Complete reduction -0
- 75% reduction -1
- 50% reduction -2
- 25% reduction -3
- No change -4

## ASSESSMENT OF RESULT:

**Cured** – 76%  
to 100 % relief in signs and symptoms.

**Markedly improved** – 51% to 75% relief in signs and symptoms.

**Improved** – 26% to 50% relief in signs and symptoms.

**Unchanged** – upto 25% relief in sign and symptoms.

### Wound Healing Study:

A pilot study of ten patients of Diabetic Wound was conducted in OPD and IPD cases of Shalya Tantra Department. The cases of diabetic wound were selected and sterile dressing was done after Panchavalkala kashaya dhavan for a period of six weeks. The study revealed that the test drug is potent in reducing inflammation by reducing slough due to

**astringent** property. The wound remained healthy and healing process was promoted. By this study we can infer that Panchavalkala kashaya dhavan has a role in **desloughing**, wound contraction and reducing inflammation thus promoting wound healing process faster.

### OBSERVATIONS:

| PARAMETERS  | 1 <sup>ST</sup><br>WEEK | 2 <sup>ND</sup><br>WEEK | 3 <sup>RD</sup><br>WEEK | 4 <sup>TH</sup><br>WEEK | 5 <sup>TH</sup><br>WEEK | 6 <sup>TH</sup><br>WEEK |
|-------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| SLOUGH      | 4                       | 3                       | 1                       | 0                       | 0                       | 0                       |
| DISCHARGE   | 4                       | 3                       | 2                       | 1                       | 0                       | 0                       |
| SWELLING    | 4                       | 3                       | 2                       | 1                       | 1                       | 0                       |
| GRANULATION | 4                       | 3                       | 2                       | 1                       | 0                       | 0                       |
| SIZE        | 4                       | 3                       | 2                       | 1                       | 1                       | 0                       |

### RESULTS AND DISCUSSION

Studies indicate that the Pharmacological action of **Panchavalkala** (Bark) is found to have **Antiinflammatory** and **Antimicrobial** properties. Early researches explain that tannins present in *Nyagrodha* and *Udumbara*<sup>[3]</sup> are antioxidants and blood purifiers with anti-inflammatory actions. They hence might have helped to decrease the swelling. The phytosterols and flavonoids are anti-inflammatory and analgesic. Tannins also proved to have antimicrobial property which might have reduced the discharge. Hence these constituents in the panchavalkala might have helped in regression of signs and symptoms.

As diabetic wounds are most commonly prone for secondary infections they were selected for the study. Panchavalkal Quath is herbal based and effective anti microbial and enhances

wound healing, it can be a drug of choice in the management of diabetic wound. Further research can be continued with larger sample to justify these observations.

### CONCLUSION

The results of research project are very encouraging & indicate that the *Panchavalakala* should be studied more extensively to confirm these results & reveal other potential therapeutic effects. According to *Guna Karma*, *Nyagrodha* have properties of Varnya, Visarpaghna, Vyanga *naashanama*, *Raktapittavinashana*. *Udumbar* have properties of Vranashodhana, Ropana, *Raktapittaghna*. *Ashvathha* possess properties of Varnya, *Raktadaaha shaman*. *Plaksha* & *Parish* shows properties of *Raktapittahruta*, *Raktadoshahara*. In classical terms, it can be explained that *Katu*, *Tikta*, *Kashaya Rasa*, *Laghu*, *Ruksha*, *Teekshna Guna*, *Ushna Veerya*, *Katu Vipaka*<sup>[4]</sup> and

Kaphapittaghna properties of drugs are responsible to break the Samprapti of disease. **Desloughing** was done by **Vrana shodhan** property of **PANCHAVALKAL KASHAY** which altimetly reduced microbial load and thus enhance the wound healing. As compared with modern view, *Panchavalkala kwath* is phytochemically dominant in phenolic group components like tannins, flavonoids which are mainly responsible for its excellent activities like antiseptic, anti-inflammatory, immunomodulatory, antioxidant, antibacterial, antimicrobial and wound purifying as well as healing and astringent properties. *Panchavalkala Kashaya Dhawan*<sup>[5]</sup> reduces pain, discharge, slough, redness, swelling, surface area and depth of the wound.

***Panchavalkala Kashaya*** comprising of *Panchavalkala* is an effective formulation which is user friendly and acts as strong **astringent** antibacterial agent in diabetic wounds and also enhances the wound healing process in the same.

#### PHOTOGRAPHIC PRESENTATION:



Fig 1 : Fresh diabetic wound



Fig 2 : Diabetic wound after 1 week



Fig 3: Diabetic wound after 3 weeks



Fig 4: Diabetic wound after 4 weeks



Fig 5: Diabetic wound after 5 weeks



Fig 6: Diabetic wound after 6 weeks

### References:

1. Dr.Anant Ram Sharma, edited with 'susrutavimarsini' Hindi commentary. (2<sup>nd</sup> Ed.). Susruta samhita,maharshi susruta. Varanasi : Chukhambha prakashan, 2010
2. Dr.Y.G.Joshi, Charak Samhita of maharshi charak, Chukhambha prakashan, Varanasi, 2010
3. BhavprakashNighantu – savimarshhindi comm. By K.C. Chuneekar, haritkyadivarga, chaukhambaparakashan 2006.
4. Dr.Ganesh Krushana garde, (12<sup>th</sup> Ed.), Sartha vagbhat,vagbhtakryta ashtangrudhaya and its Marathi translation, pune : profesent publishing house,2009
5. Sushruta Samhita - Dr.Anantarama Sharma ed. Sushruta Samhita of Sushruta reprint ed. 2008, ChaukhambhaSurabharatiPrakashana, Varanasi.

### Cite this article:

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AYURLINE: INTERNATIONAL JOURNAL OF RESEARCH IN INDIAN MEDICINE 2014; 1(1) : 1-6