

## THE EFFICACY OF VRANA ROPAK PROPERTY OF TILA KALKA ON VRANA

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### ABSTRACT

Structural and physiological disruption and discontinuity of a living tissue is called wound. Healing of wound is one of the phenomena that holds a great importance since ancient times and hence has occupied a great space in our Ayurvedic texts. *Sushrutacharya* has explained different types of wounds and their complete management. Sixty measures for the management of have been dealt with in detail, among which *Kalka* application is one such measure. We have taken *Tila kalka* as one for *vrana ropaka*. As *Tila Kalka* is *Madhur*, *Ushna* and *Snigdha*, it is *Vatashamak*; it is also *Kashaya*, *Madhur* and *Tikta*, so *Pittashamaka* and as it is *ushna*, *kashaya* and *tikta*, it is *kaph shamak*.

The pain in the wound is effectively reduced due to *Madhura Rasa*. There occurs highly significant reduction in discharge due to *Tikta anurasa* and *Ruksha guna*, reduction in tenderness due to *Ushna veerya* of the drug. The colour of *vrana* significantly changes due to *Twakprasadan guna*. Smell gets reduced due to *Kledahara* property of *Kashaya*, *Tikta anurasa* and *Ruksha guna*. Also closure of margins of *vrana* is due to *Kashaya rasa* and *Vranropaka guna*. There is effective reduction in floor size due to *Vranashodhaka* property. Due to *Madhura rasa* and *Kashaya anurasa* with *Vranropaka Guna*, there is highly significant reduction in size of wound. Overall, no major side effects of local application of *Tila kalka* is seen.

**KEYWORDS:** *Tila kalka*, *vrana*, *vrana ropaka*.

## INTRODUCTION

*Tila* consists of dried seeds of *Sesamum indicum* Linn. belonging to the family Pedaliaceae is an erect glandular pubescent, annual herb branching from the base, it is an herb extensively cultivated throughout the plains of India upto 1200 m for its seeds. Its seed is a rich source of edible oil.<sup>[1]</sup> The *Bhavaprakasha Nighantu* describes only three types of *Tila* seeds, viz., black, white and red. There are two variety of sesamum existing in India. Black and white among white variety sesame seeds contain more quantity of lignin compounds than the black and brown varieties, in which sesamin and sesamolignin are the two major lignans.<sup>[2]</sup> Both of them having nearly similar chemical composition. White sesame seeds are considered to be better for edible purpose and the black sesame seeds are preferable for use of medical conditions. *Tila taila* is the one of the best drugs used for *vatashamana*. Most of the oils used in Ayurvedic medicines has *Tila taila* as a base. Sesame was a major oilseed in the ancient world because of its ease of abstraction, its great stability, and its drought resistance.<sup>[3]</sup>

Even since the birth of mankind, trauma is the first type of ailment which the man must have experienced & treatment of resultant effect of trauma viz, the wound must have been the lesion which received the first attention & which required surgical treatment. Due to constant exposure to trauma, man has been susceptible to wounding. The response of tissue to the injury has formed the basis of all surgical practices.

Wound & its management have been dealt since the beginning of the Vedas to the current era & has been a major problem since the early stages of medical study. In spite of brilliant advances in surgical field, wound management still remains a subject of speculation. In Ayurveda particularly *Sushruta* has mentioned various types of wounds & their management which is of fundamental importance for any surgical practice. In Ayurveda, such wounds are treated as *vrana*. All the wounds if not treated properly may turn into *dusht vrana* which always heal by secondary intention along with scar formation or may assume such proportions which may necessitate amputation. Systematised records about the management of wounds are available in *Sushruta Samhita*. *Sushruta* has exhaustively studied the subject of wound management. The problem of wound healing is a vital problem faced by clinician even today.

*Acharya Sushruta* has mentioned 60 upakramas for the treatment of *Vrana*. From these 60 upakramas *kashaya*, *Varti*, *Kalka*, *Sarpi*, *Taila*, *Rasakriya*, *Avachurnana* are used for *Vrana Shodhana* and *Ropana*. Among these *Kalka upakramas* have their own specific indications in

the management of *vranas*. *Kalka* have both *vrana shodhana* & *vrana ropana* properties. *Tila kalka* is having *tridosahara* property. In certain wounds which are pus- free but with delayed healing, *Tila kalka* with honey is specified. *Tila* possess *shodhana* & *ropana* properties these are considered as the good measures for local treatment of *dustha vrana*.

### Definition of *vrana*<sup>[4]</sup>

As the scar of a wound never disappears even after complete healing & as its imprint persists lifelong. It is called as *vrana* by the wise. *Vrana* is that which makes person to pray till his life exists that which exposes the interior of body.

### Classification<sup>[5-9]</sup>

*Vrana* is mainly classified into two headings by our *Acharyas* i.e *Nija* & *Aagantuja* depending upon the causative factors. The *Doshas* get initiated by their own causative factors as by the external agent.

1. ***Nija or Shaareeraja vrana:-*** *Nija vranas* are caused to the vitiation of *doshas* like *vaataja*, *pittaja*, *kaphaja*, *Raktaja* & *Sannipaataja* as 5 types described by *Acharya Susruta*. There are further classified into 15 types on the basis of permutation & combination of *tridoshas* along with *Rakta*.
2. ***Aagantuja Vrana:-*** It's caused by trauma from *purusha*, *pashu*, *pakshi*, *vyaala*, *prapatana*, *peedana*, *prahara*, *teekshna aoushadha*, *Agni*, *kshaara*, *visha*, *kapaala*, *shringa*.

*Sushruta* has mentioned 6 types- *chinna*, *bhinna*, *viddha*, *kshata*, *picchita*, *ghrishta*. *Astanga sangraha* mentions 3 types- *chinna*, *viddha*, *picchita*. *Astanga hridaya* mentions 8 types- *Ghrishta*, *Avakruta*, *Vicchinna*, *pravilambitas*, *paatita*, *viddha*, *Bhinna*, *vidalith*. *Madhava Nidana* has mentioned same as *Susruta*. *Sharangdhara* has mentioned 8 types. Schematic representation of classification of *Vrana*:

1. Kaarana - *Nija*, *Aagantuj*
2. Avastha – *Dusta*, *Shuddha*, *Ruhyamaana*, *Roodha*.
3. Aakruthi – *Aayatha*, *Chathurasra*, *Vrutha*, *Triputaka*.
4. *Sadhyasaadhyatha*- *Sukhasaadhya*, *Kruchrasaadhya*, *Yaapya*, *Asadhya*.

### DISCUSSION

Due to variations in the manifestation of *vrana*, the various recipes of external application are available. In case of external application various formulations for debridement of wound are

mentioned such as *kashaya*, *kalka*, *churna*, *rasakriya*, *varti*, *taila* & *ghritha* depending on the *avastha* of *vrana*.

### **TILA<sup>[10]</sup>**

**Latin name:** Sesamum indicum D.C

**Family:** Pedaliaceae

### **Vernacular names**

Hindi – *Tila*, English – Sesamum seeds, Telugu – Nuvvulu, Tamil – Ellu

**Rasa:** *Madhura*, *kashaya*, *tikta*

**Virya:** *Usna*

**Guna:** *Guru*, *snigdha*

**Vipaka:** *Madhura*

**Karma:** *Vatahara*, *tvacya*, *balya*, *kesya*, *sukrala*

**Indications:** *Vataroga*, *grahani*, *agnimandhya*, *yoniroga*.

### **Method of preparation**

*Tila* seeds was taken and crushed, later it was mixed with water. The mixture was made into *kalka* form, which was neither hard nor too dilute. This *Kalka* must be applied on the surface of the wound to ensure its effect and result on *vrana*.

### **Chemical constituents<sup>[11]</sup>**

Chemical constituents in *Tila* (sesame seeds) is – around 55% oils, sesamin, sesamolin, sesamol (3,4- methylenedioxy-phenol), Fatty oils are mainly composed of 48% of oleic acid, 37% linoleic acid, palmitic acid, stearic acid, arachidonic acid. Krishna *Tila* (black sesame) also contains vitamin E, B-complex vitamins (especially niacin), phytosterols, proteins, sucrose, saccharides, sesamose, and trace amount of phosphorus, potassium and cytochrome C. *Tila* (black sesame seeds) is very good source of calcium, which has been proved through various studies across the globe.

### **Sesame Seeds Nutritional Profile<sup>[11]</sup>**

Sesame seeds have a excellent nutritional value. The seeds are especially high in copper, manganese, calcium, and magnesium. Here are some notable vitamins, minerals, and other nutrients from approximately 28-30 gm of Sesame. Sesame protein is rich in sulphuraminoacids, particularly methionine (2.6-3.5g /16g/N) and tryptophan. It has abundant

oleic and linoleic acids.6 Manganese – 0.7 mg. Copper – 0.7 mg. Calcium – 277 mg. Iron – 4.1 mg Magnesium – 99.7 mg.

### Properties of *Tila*<sup>[12]</sup>

*Tila* is *Agneya, Ushna, Tikshna, Madhur rasa, madhur vipaki, Bruhan, Prinana, Vyavayi, Sushma, vishad, vikasi, Twak-prasarak, medhya vardhak, Mardavkar, Mansavardhak, Staryakar, Vranahitkar.*

### CONCLUSION

- *Tila* (*Sesamum Indicum* Linn.) *Kalka* is significantly effective to reduce *Vedana, Strava, Gandha* and improve *Vrana* parameters in *Sadyovrana* patients
- As *Tila Kalka* is *Madhur, Ushna and Snigdha*, it is *Vatashamak*; it is also *Kashaya, Madhur* and *Tikta*, so *Pittashamaka* and as it is *ushna, Kashaya* and *tikta*, it is *kaph shamak*
- The pain in the wound is effectively reduced due to *Madhura Rasa*. There occurs highly significant reduction in discharge due to *Tikta anurasa* and *Ruksha guna*, reduction in tenderness due to *Ushna veerya* of the drug. The colour of *vrana* significantly changes due to *Twakprasadan guna*. Smell gets reduced due to *Kledahara* property of *Kashaya, Tikta anurasa* and *Ruksha guna*.
- Also closure of margins of *vrana* is due to *Kashaya rasa* and *Vranropaka guna*. There is effective reduction in floor size due to *Vranashodhaka* property. Due to *Madhura rasa* and *Kashaya anurasa* with *Vranropaka Guna*, there is highly significant reduction in size of wound. Overall no major side effects of local application of *Tila kalka* is seen.

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