



Role Of *Sandhaneeya Mahakashaya* In The Treatment Of Wound Healing – A Review

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ABSTRACT

Ayurveda, the ancient traditional system of medicine, In *Ayurveda*, wound is considered as '*Vrana*,' which specifically means an injury to the skin. It is described as damage to the epidermis caused by any kind of injury Charaka Samhita, holds a vast heritage of wisdom. In the *Sutra Sthana*, 4th chapter "*Shad Virechana Shatashriteeya*" of Charaka Samhita, the author describes 50 *Mahakashayas* or *Dashemanees*. These are groups of 10 herbs, each group sharing a common pharmacological action. One of such group is the *Sandhaneeya Mahakashaya*. It includes herbs like *Madhuyashthi* (*Glycyrrhiza glabra*), *Guduchi* (*Tinospora cordifolia*), *Prishniparni* (*Uraria picta*), *Patha* (*Cissampelos pareria*), *Lajjalu* (*Mimosa pudica*), *Mocharasa* (*Bombax ceiba*), *Dhataki* (*Woodfordia fruticosa*), *Lodhra* (*Symplocos racemosa*), *Priyangu* (*Callicarpa macrophylla*), and *Katphala* (*Myrica esculenta*). It is well known that some plants have a natural ability to heal wounds. Therefore, this traditional system of medicine is useful in identifying specific herbs that aid in the regeneration and growth of damaged body tissues

Keywords – *Sandhaneeya, Vrana, Mahakashaya*

INTRODUCTION

The *Mahakashayas* are a unique concept explained by Acharya Charaka in the 4th chapter of *Sutra Sthana*. This chapter describes 600 *Dravyas* (substances) used in *Vamana and Virechana Karma*, along with an explanation of 500 *Dravyas* grouped into 50 groups, each containing 10 *Dravyas*. *Sandhaneeya Mahakashaya*, is one of these *Mahakashayas*.

Acharya Susruta in *Susruta Samhita Chikitsa Sthana*, elaborately describes about *Vrana*. The term *vrana* derived from the root "*Vriya*" which means "to recover, *Vrana* is defined as that which leaves a scar after destruction of the skin, by any kind of intrinsic or extrinsic factors.

- a) *Nija Vrana* (Internal factors) - caused by the aggravation of *Tridosha*
- b) *Agantuja Vrana* (External factors) - Due to Assault/Injury to the body In

Susruta Samhita Acharya described three stages of *Vrana*,

- (i) *Ama* (Unsuppurated Wound)
- (ii) *Pachyamana* (Early Suppurated Wound)
- (iii) *Pakva* (Fully Suppurated Wound).

According to modern aspects, A wound is any disruption or damage to living tissue, such as skin, mucous membranes or organs. Wound may be caused by- Trauma, Physical, chemical and microbial agents etc. Wound healing is a complex process described in four basic processes:

- a) Inflammation
- b) Wound Contraction
- c) Epithelialization
- d) Granulation tissue Formation
- e) Scar Remodelling

a) Inflammation

- Immediately after disruption of tissue integrity inflammation starts
- presented by redness, tenderness, heat, swelling and loss of function

b) Wound Contraction

Wound contraction has been noticed in open wounds with tissue loss. Not begins immediately and that about 3-4 days elapse before movement of edge become measurable

Causes:

- Removal of fluid
- Contraction of collagen
- Contraction of granulation tissue

c) Epithelialization

Epithelialization is the process of epithelial tissue forming over a denuded surface, within 48 hours, the entire wound surface is re-epithelialized. Creating a protective barrier between the underlying wound and its surroundings

d) Granulation tissue formation

The granulation tissue is mainly formed by proliferation and migration of the surrounding connective tissue elements. The two stages are considered in this process:

- i) stage of vascularization
- ii) stage of devascularization

i) Stage of vascularization

Wound clot is invaded by microphages, which with their phagocytic activities remove the particulate matters and move towards the centre of the wound. This process is followed by capillary loops and fibroblasts.

ii) Stage of Devascularization

In this stage fibroplasia proceeds and some vessels undergo atrophy, whereas their lumen become obliterated due to initial proliferation. So, the granulation tissue looks pale at this stage.

f) Scar Remodelling

Last stage of wound healing. During the remodelling phase, the primary objective is to generate new epithelium and scar tissue, a process that may extend over a period of a year or more to reach completion. Upon completion of the remodelling phase, the newly formed tissue exhibits considerable tensile strength with fewer cells and minimal vascularization.

Acharya Susruta described treatment of *Vrana* (Wound) in general through *Shashti Upakramas* (60 Procedures), which includes in *Sapta Upakrama* of *Sopha*, They are: *Vimlapana*, *Avasechana*, *Upanaha*, *Patanakriya*, *Sodhana* (Purification), *Ropana* and *Vaikritapaham*

The general line of treatment of *Vrana* (Wound) includes drugs which is having *Sodhana*, *Ropana*, *Dahahara* and *Sravahara* properties

Drugs which is having *Katu*, *Tiktha*, *Kashaya*, *Madhura Rasa* with *Amapachaka*, *Tridosahara*, *Krimihara* and *Vranahara* properties are used for the management of wounds

Materials and Methods

All necessary information related to *Sandhaneeya mahakashaya* are taken from *charaka samhitha sutrasthana* 4th chapter. *Rasa*, *guna*, *virya vipaka* and *karma* of *dravyas* in *sandhaneeya mahakashaya* are taken from *charaka samhitha* and various textbooks of *Dravyaguna vigyana*.

Table 1: List of *Sandhaneeya mahakashaya* and its *Rasa panchaka* and *Karma*

Name of the Drug	Botanical name	Rasa	Guna	veerya	Vipaka	Karma
<i>Madhuka</i>	<i>Glycyrrhiza glabra</i>	<i>Madhura a Tikta</i>	<i>Guru, Snigdha</i>	<i>Madhura</i>	<i>Sheeta</i>	<i>Balya, Varnya, Vranahara, Sothahara, Vishaghna, Rakthapittahara</i>
<i>Guduchi</i>	<i>Tinospora cordifolia</i>	<i>Tikta Kashaya</i>	<i>Guru</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Balya, Krimihara, Dahahara, Vishaghni, Deepana, Amahara</i>
<i>Prusniparni</i>	<i>Uraria picta</i>	<i>Madhura</i>	<i>Laghu Sara</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Tridosasamaka, Vranahara, Dahasamaka, Jwaraghna</i>
<i>Ambastaki</i>	<i>Cissampelos pareira</i>	<i>Tikta Kashaya</i>	<i>Laghu Ruksha</i>	<i>Sheeta</i>	<i>Katu</i>	<i>Bhagna, sandhanakruth, Raktapittahara</i>
<i>Samanga</i>	<i>Mimosa pudica</i>	<i>Tikta Kashaya</i>	<i>Laghu Ruksha</i>	<i>Sheeta</i>	<i>Katu</i>	<i>Sandhaneeya, Vedanasthapaka, Grahi, Shothahara</i>
<i>Mocharasa</i>	<i>Bombax ceiba</i>	<i>Kashaya</i>	<i>Snigdha Sheet</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Sandhaneeya, Brumhaneeya, Raktapittagna</i>
<i>Dhataki</i>	<i>Woodfordia fruticosa</i>	<i>Katu Kashaya</i>	<i>Laghu</i>	<i>Sheeta</i>	<i>Katu</i>	<i>Raktha stambhana, Vrana Ropana Sandhaneeya</i>
<i>Lodra</i>	<i>Symplocos racemosa</i>	<i>Kashaya</i>	<i>Laghu Sheet</i>	<i>Sheeta</i>	<i>Katu</i>	<i>Sandhaneeya, Vrana ropaka, Rakthasthambhana</i>
<i>Priyangu</i>	<i>Callicarpa macrophylla</i>	<i>Tikta Kashaya</i>	<i>Guru</i>	<i>Sheeta</i>	<i>Katu</i>	<i>Sandhaneeya, Vrana ropaka, Rakthasthambhana</i>

Table 2: Pharmacological Activity of Drugs of of *Sandhaneeya mahakashaya*

Name of the Drug	Pharmacological Activity
<i>Madhuka</i>	Antioxidant and Ant- inflammatory properties
<i>Guduchi</i>	Antimicrobial, Anti-inflammatory, Immunomodulatory activity
<i>Prusniparni</i>	Antiseptic, Antimicrobial, Anti-inflammatory and Analgesic properties.
<i>Ambastaki</i>	Antiseptic, Anti-inflammatory activity, Anti-helminthic, Antioxidant, Anti-haemorrhagic effects.
<i>Samanga</i>	Antibacterial, Anti-inflammatory
<i>Mocharasa</i>	Anti-inflammatory, Antibacterial, Analgesic properties
<i>Dhataki</i>	Anti-ulcer, Anti-inflammatory, Analgesic properties Immunomodulatory and Antibacterial properties
<i>Lodra</i>	Anti-inflammatory and Anti-ulcer properties,
<i>Priyangu</i>	Antibacterial, Anti-inflammatory and Analgesic properties.
<i>Katphala</i>	The plant is having Analgesic, Antimicrobial, Antiulcer, Antioxidant, Anti-inflammatory actions

RESULT & DISCUSSION

From the above study, we can understand that the vitiation of *tridosha* and external injury are the causative factors. The drugs in *Sandhaniya Mahakashaya* contain *Katu*, *Tikta*, *Kashaya* or *Madhura rasa pradhana dravyas*, which are favorable for the complete management of wounds.

Madhura rasa has *Preenana*, *Kshata Ksheena*, *Sandhana kara*, and *Sthairya kara* properties, meaning it provides nourishment, promotes proper blood supply to the ulcer, heals the wound, and gives stability to the newly formed tissues. *Tikta*, *Kashaya* and *Katu rasa* prevent the aggravation of *Pitta* and possess *Dahahara* and *Stambhaka* actions, which give firmness to the skin and tissue, scrape away unwanted tissue, and dry up *Kleda*, *Vasa*, *Majja*, *Lasika*, and *Puya*. Thus, the *Vrana* undergoes proper *Paka* and transitions from the *Ama* stage to the *Pakva* stage. Due to its *Sheetha virya*, it has *Kapha* and *Pitta hara* properties, with actions such as *Rakta prasadaka*, *Vrana hara*, *Sandhaniya*, and *Sopha hara*, thereby aiding in the overall healing of the wound. The *Ushna virya* of the drug is responsible for *Deepana karma*. The drugs possess actions like *Amapachaka*, *Krimihara*, *Vranahara* (wound healing), and *Vishahara* properties for managing wounds. Drugs of *Sandhaniya Mahakashaya* exhibits pharmacological actions such as antiseptic, anti-inflammatory, anti-helminthic, anti- haemorrhagic, and antibacterial effects.

CONCLUSION

The data related to *Vrana* (wound) and *Vrana Ropaka Dravya* and their actions is better explained in the traditional system of medicine than in modern science. Numerous medicinal plants, metals, minerals, and animal products mentioned in our ancient literature are classified as *Vrana Ropaka Dravyas*. However, only a few have been scientifically proven to demonstrate their efficacy in wound healing. Ideal wound healing is described as the successful closure of the wound without any adverse effects and within a minimal number of days.

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