

JATAYADI OIL: AN ANALYTICAL STUDY**Dr. Neelam Sajwan***

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Article Received on 14/11/2017

Article Revised on 04/12/2017

Article Accepted on 24/12/2017

INTRODUCTION

Wound healing is a complex cellular and biochemical cascade that leads to restitution of integrity and function. Although individual tissue may have unique healing characteristics, all tissues heal by similar mechanisms and the process undergoes phases of inflammation, cellular migration, proliferation, matrix deposition and remodeling^[1]

Wound healing has been described throughout the history. Our ancient Acharyas knew that proper wound debridement is the fundamental step in wound healing process. That's why *shodhan* along with *ropana dravya* in the Indian context have been vividly elaborated in the three equal great treatises (*Brahatrayi*) of *Ayurveda* viz. *Charaka Samhita*, *Sushruta Samhita* and *Astang Sangraha*.

From the above it is clear that wounds and their management have attracted the attention of clinicians since the dawn of human history. Simple wounds get healed up automatically as a natural process. Chronic wound are defined as wounds that have failed to proceed satisfactory anatomic and functional integrity or that have proceeded through the repair process without producing an adequate anatomic and functional results.^[2]

However, wound healing is delayed and becomes difficult to manage if they become infected. In fact, infections caused by various pathogens are the most important factors responsible for delay in wound healing, consequently leading to the formation of a *Dushta vrana*. The *Dushta vrana* becomes even more complicated and difficult to manage if body's normal biological response to fight wounds becomes impaired. *Acharya Sushruta*, the father of Ancient surgery, was well aware for normal wound healing. He propounded, practiced and described a number of drugs and procedures for *vrana shodhana* and *vrana ropan*.

In India maximum population resides in rural areas under poor hygienic and nutritional conditions, so the incidence of delayed wound healing and wound infection is more. Often due to unhygienic living conditions, poor nutrition and carelessness even simple wound gets infected to cause a great sufferance to them.

The problem and the shortcoming in the management of wound, contaminated with dead tissue or slough,

suppuration, delayed healing, burning sensation has promoted us to look back to the ancient *ayurvedic samhitas*.

Jatyadi oil ingredients^[1]

1. Jati(Leaves): *Jasminum officinale*, Oleaceae
2. Nimba(Leaves): *Azadirachta indica*, Meliaceae
3. Patola (Leaves): *Trichosanthes dioica*, Cucurbitaceae
4. Madhuyasthi (Root): *Glycyrrhiza glabra*, Leguminosae
5. Haridra (Rhizome): *Curcuma longa*, Zingiberaceae
6. Daruharidra (Root): *Berberis aristata*, Berberidaceae
7. Manjistha (Root): *Rubia cordifolia*, Rubiaceae
8. Karanja(Leaves): *Pongamia pinnata*, Leguminosae
9. Kustha (Root): *Saussurea lappa*, Compositae
10. Kutaki (Root): *Picrorhiza kurroa*, Scrophulariaceae
11. Padmakh (Beejmajja): *Prunus cerasoides*, Rosaceae
12. Lodhra (Stembark): *Symplocos racemosa*, Symplocaceae
13. Haritaki (Fruit): *Termanalia chebula*, Combretaceae
14. Nilophar (Panchang): *Nymphaea stellata*, Nymphaeaceae
15. Sariva (Root): *Hemidesmus indicus*, Asclepidaceae
16. Naktamala (Seed): *Pongamia pinnata*, Leguminosae
17. Tuttha: Copper sulphate
18. Honey bee wax
19. Seasasum oil

Method of preparation

All the contents of *jatyadi* oil are taken in equal amount and a paste is prepared. Now four times oil and eight times water are mixed in the prepared paste. This mixture is heated slowly till water is evaporated completely and rest oil is there. After filtering it, *jatyadi oil* is ready.

Uses

Poisonous wound (caused by spider, snake etc), simple wound, itching (dry and wet both), erysipelas, incisional wound, burn, penetrating wound, abrasion, wound

caused by animal bite etc.

Pharmacodynamic properties of contents of *Jatyadi* oil

| S.N. | Plant name | Rasa | Guna | Veerya | Vipaka | Doshkarma |
|------|------------------------------|-------------------------|-------------------------|--------|--------|--------------------|
| 1 | Jati ^[4] | Tikta, Kashaya | Laghu, Mridu, Snigdha | Ushna | Katu | Tridosh-har |
| 2 | Nimb ^[5] | Tikta, Kashaya | Laghu | Sheet | Katu | Kapha-pitta shamak |
| 3 | Patola ^[6] | Tikta | Laghu, Ruksha | Ushna | Katu | Tridosh-shamak |
| 4 | Madhuyasti ^[7] | Madhur | Guru, Snigdha | Sheet | | Vata-pitta shamak |
| 5 | Haridra ^[8] | Tikta, Katu | Ruksha, Laghu | Ushna | Katu | Tridosh-shamak |
| 6 | Daruharidra ^[9] | Tikta, Kashaya | Laghu, Ruksha | Ushna | Katu | Kapha-pitta shamak |
| 7 | Mangistha ^[10] | Tikta, Kashaya, Madhur | Guru, Ruksha | Ushna | Katu | Kapha-pitta shamak |
| 8 | Karanj ^[11] | Tikta, Kashya, Katu | Laghu, Tikshna | Ushna | Katu | Kapha-vata shamak |
| 9 | Kustha ^[12] | Tikta, Katu, Madhur | Laghu, Ruksha, Tikshna | Ushna | Katu | Kapha-vata shamak |
| 10 | Kutaki ^[13] | Tikta | Ruksha, Laghu | Sheet | Katu | Kapha-pitta shamak |
| 11 | Padmakh ^[14] | Kashaya, Tikta | Laghu | Sheet | Katu | Kapha-pitta shamak |
| 12 | Lodhra ^[15] | Kashaya | Laghu, Ruksha | Katu | Sheet | Kapha-pitta shamak |
| 13 | Haritaki ^[16] | Panchrasa (lawanvarjit) | Laghu, Ruksha | Ushna | Madhur | Tridosh-shamak |
| 14 | Nilophar ^[17] | Kashaya, Madhur, Tikta | Laghu, Snigdha, Picchil | Sheet | Madhur | Kapha-pitta shamak |
| 15 | Sariva ^[18] | Madhur, Tikta | Guru, Snigdha | Sheet | Madhur | Tridosh-shamak |
| 16 | Naktamal ^[19] | Tikta, Katu, Kashaya | Laghu, Tikshana | Sheet | Katu | Kapha-vata shamak |
| 17 | Blue ^[20] vitriol | Katu, Kashaya, Madhur | Laghu | Ushna | Katu | Kapha-pitta shamak |
| 18 | Til ^[21] | Madhur | Guru, Snigdha | Ushna | Madhur | Tridosh-shamak |

| Rasa | Guna | Veerya | Vipaka | Doshkarma |
|---|--|-------------------------|------------------------|--|
| Tikta(15), Kashaya(11), Madhur(7) | Laghu(13), Ruksha(7), Snigdha(5), Guru(4) | Ushna(10), Sheeta(6) | Katu(11), Madhur(5) | KP shamak(8), Tridoshshamak(6), KV shamak(3) |

Action of drugs used in *Jatyadi* oil

| | | |
|----|-------------------------|--|
| 1 | <i>Vrana shodhan</i> | <i>Jati, Nimb, Patola, Daruharidra, Haritaki, Til</i> |
| 2 | <i>Vrana ropana</i> | <i>Jati, Nimb, Patola, Daruharidra, Haritaki, Til, Mangistha, Lodhra</i> |
| 3 | <i>Kusthaghana</i> | <i>Jati, Kustha, Padmakh, Lodhra, Haritaki, Sariva, Mangistha</i> |
| 4 | <i>Kandughana</i> | <i>Jati, Nimb, Madhuyasti, Padmakh, Naktamal</i> |
| 5 | <i>Jantughana</i> | <i>Nimb, Kustha, Haridra, Kutaki, Naktamal</i> |
| 6 | <i>Vrana pachan</i> | <i>Nimbpatra, Haridra</i> |
| 7 | <i>Vedana sthapana</i> | <i>Patola, Kustha, Haritaki, Til, Daruharidra, Padmakh, Naktamal</i> |
| 8 | <i>Putihar</i> | <i>Nimb, Kustha</i> |
| 9 | <i>Daha prashman</i> | <i>Nimb, Padmakh, Sariva, Nilophar</i> |
| 10 | <i>Rakta- sthabhaka</i> | <i>Lodhra, Til, Madhuyasti, Haridra, Daruharidra, Padmakh, Nilophar</i> |
| 11 | <i>Rakta- prashadak</i> | <i>Nimb, Jati, Haridra, Karanj, Padmakh, Naktamal, Haritaki</i> |
| 12 | <i>Rakta- shodhak</i> | <i>Patola, Mangistha, Karanj, Kustha, Kutaki, Sariva</i> |
| 13 | <i>Vishaghana</i> | <i>Sariva, Nilophar</i> |

| S.N. | Plant name | Action |
|------|--------------------|--|
| 1 | Anti- inflammatory | <i>Jati^[22], Nimb^[23], Patola^[24], Madhuyasti^[25], Haridra^[26], Daruharidra^[27], Manjistha^[28], Karanj^[29], Kustha^[30], Kutaki^[31,32], Lodhra^[34], Haritaki^[35], Nilophar^[36], Sariva^[37], Naktamal^[38]</i> |
| 2 | Antioxidant | <i>Patola, Madhuyasti, Kutaki, Haridra, Lodhra, Padmakh^[33], Nilophar, Sariva, Seasasum^[39], Blue vitriol.^[40]</i> |
| 3 | Analgesic | <i>Haridra, Daruharidra, Lodhra, Padmakh, Nilophar, Blue vitriol</i> |
| 4 | Anti-ulcer | <i>Nimb, Madhuyasti, Haridra, Daruharidra, Karanj, Sariva, Kutaki, Haritaki, Kustha, Padmakh, Naktamal, Seasasum.</i> |
| 5 | Anti-microbial | <i>Jati, Nimb, Madhuyasti, Haridra, Daruharidra, Karanj, Lodhra, Kutaki, Haritaki, Kustha, Nilophar, Sariva, Blue vitriol, Seasasum.</i> |
| 6 | Immuno-modulator | <i>Haridra, Daruharidra, Haritaki, Kusth, Nimb</i> |
| 7 | Haemostatic | <i>Karanj, Padmakh, Lodhra, Nilophar, Seasasum.^[39]</i> |

CONCLUSION

Wound management is the fundamental unit in the surgical practice. Any elective surgical intervention results in a wound in order to gain access to and deal with the underlying pathology. In case of trauma caused by road traffic accident, non-accidental injuries or any elective surgery wound is the primary pathology. In both situations the surgeon's task is to minimize the adverse effects of the wound, repair or remove damage structures and speed up the wound healing process to restore function.

According to *Achrya Sushruta kashaya, tikta, madhur, katu* and *ushna dravya* are used in wound healing (*vrana ropan*).^[41] *Jatyadi* oil has *tikta pradhan, kashya madhyam* and *madhur heena rasa*.

Plants and their extracts have immense potential for management and treatment of wounds. The phyto-medicines for wound healing are not only cheap and affordable but also purportedly safe as hyper sensitive reactions are rarely encountered with the use of these agents. These natural agents induce healing and regeneration of lost tissue by multiple mechanisms.^[42]

1. Effect on wound debridement: *Vrana shodhan* properties of *Jati, Nimb, Patola, Daruharidra, Haritaki, Til*.
2. Effect on wound healing: *Vrana ropana* properties of *Jati, Nimb, Patola, Daruharidra, Haritaki, Til, Mangistha, Lodhra, Anti ulcer properties Nimb, Madhuyasti, Haridra, Daruharidra, Karanj, Sariva, Kutaki, Haritaki, Kustha, Padmakh, Naktamal, Seasasum*.
3. Effect on pain: *Vedana sthapana* properties of *Patola, Kustha, Haritaki, Til, Daruharidra, Padmakh, Naktamal*, Analgesic actions of *Haridra, Daruharidra, Lodhra, Padmakh, Nilophar, Blue vitriol*
4. Effect on bleeding: *Rakta-stambhaka* properties of *Lodhra, Til, Madhuyasti, Haridra, Daruharidra, Padmakh, Nilophar* Hemostatic actions of *Karanj, Padmakh, Lodhra, Nilophar, Seasasum*
5. Effect on burning sensation: *Daha prashman* by *Nimb, Padmakh, Sariva, Nilophar*
6. Effect in discharge: By *Jantughana* properties of *Nimb, Kustha, Haridra, Kutaki, Naktamal, Putihar* properties of *Nimb, Kustha, Vishghana* action of *Sariva, Nilophar*, Anti-microbial action of *Jati, Nimb, Madhuyasti, Haridra, Daruharidra, Karanj, Lodhra, Kutaki, Haritaki, Kustha, Nilophar, Sariva*, Blue vitriol, *Seasasum*.
7. Effect on itching: *Kandughan* action of *Jati, Nimb, Madhuyasti, Padmakh, Naktamal*
8. Effect on blood purification: *Rakta- prashadak* properties of *Nimb, Jati, Haridra, Karanj, Padmakh, Naktamal, Haritaki, Rakta- shodhak Patol* properties of *Mangistha, Karanj, Kustha, Kutaki, Sariva*

By analyzing its properties, we can say that it's the perfect blend of medicines which shows its positive response in various types of wounds viz. contusion, incised, abrasion, lacerated, crushed, penetrating, burn, varicose ulcer, fissure-in-ano etc. Through its enormous wound healing properties, it provides a miraculous positive result, that's why it is most popular medicine in the *Shalya* department.

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