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Review Article

A Review On Wound Healing Activity Of Medicinal Plants

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Abstract

This paper presents a review of plants identified from various ethno botanical surveys with Wound healing activity. Wound is defined as the disruption of the cellular and anatomic continuity of a tissue. Wound may be produced by physical, chemical, thermal, microbial or immunological insult to the tissues. Wound healing is a dynamic and normal biological process involving fibroblast activation and migration, re-epithelization, proliferation of endothelial cells, and angiogenesis, which are accompanied by inflammatory response and oxidative reactions in the damaged area. Herbs have been integral to traditional and non -traditional forms of medicine dating back at least 5000 years. The enduring popularity of herbal medicines may be explained by the perception that herbs cause minimal unwanted side effects. This review discuss about Wound healing potential of plants, its botanical name, Common name, family, part used and type of wound for which they are used, which are helpful for researcher to development new Wound healing formulations for human use.

Keywords: Wound, Healing, Herbal

INTRODUCTION

Wound is defined as the disruption of the cellular and anatomic continuity of a tissue. Wound may be produced by physical, chemical, thermal, microbial or immunological insult to the tissues. The process of wound healing consists of integrated cellular and biochemical events leading to re-establishment of structural and functional integrity with regain of strength in injured tissues.

Several drugs of plant, mineral and animal origin are described in the Ayurveda for their wound healing properties. Inspite of recent advances in the basic mechanism of wound healing, knowledge of factors involved in the development and treatment of wounds and their prevention remains limited. Pathogenesis and failure to heal are two inseparable aspects in case of wound healing and this has guarded and intensified the use of herbal drugs as a wound healing agent. Plants and their extracts have immense potential for the management and treatment of wounds. The phytomedicines for wound healing are not only cheap and affordable but are also purportedly safe as hypersensitive reactions are rarely encountered with the use of these agents. These natural agents induce healing and regeneration of the lost tissue by multiple mechanisms. However, there is a need for scientific validation, standardization and safety evaluation of plants of traditional medicine before these could be recommended for healing of the wounds. Plants or chemical entities derived from plants need to be identified and formulated for the treatment and management of wounds.

Classification of wounds

Wounds are classified as open and closed wound on the underlying cause of wound creation and acute and chronic wounds on the basis of physiology of wound healing.

Open wounds

In this case blood escapes the body and bleeding is clearly visible. It is further classified as: Incised wound, Laceration or tear wound, Abrasions or superficial wounds, Puncture wounds, Penetration wounds and gunshot wounds.

Closed wounds

In closed wounds blood escapes the circulatory system but remains in the body. It includes Con-

tusion or bruises, hematomas or blood tumor, Crush injury etc.

Acute wounds

Acute wound is a tissue injury that normally precedes through an orderly and timely reparative process those results in sustained restoration of anatomic and functional integrity. Acute wounds are usually caused by cuts or surgical incisions and complete the wound healing process within the expected time frame.

Chronic wounds

Chronic wounds are wounds that have failed to progress through the normal stages of healing and therefore enter a state of pathologic inflammation chronic wounds either require a prolonged time to heal or recur frequently. Local infection, hypoxia, trauma, foreign bodies and systemic problems such as diabetes mellitus, malnutrition, immunodeficiency or medications are the most frequent causes of chronic wounds.

Table1 Plants with Healing Properties

Sr no	Common name	Botanical name	Family	Plant Parts used	Types of wound
1.	Neem	Azardirachta indica	Meliaceae	Leaves, bark and fruits	Acute, chronic, excision, and incision
2.	Sajjana	Margina oleifora Lam.	Moringaceae	Root bark	Excision , incision
3.	Haldi	Curcuma domestica	Zingiberaeae	Rhizomes and leave	Excision , incision
4.	Jaitoon	Olea europaea	oleaceaea	Seed	Acute , open
5.	Ashwagandha	Withania somnifera	solanaceae	Dried root	Injury, open & close
6.	Orchid	Ceologyne cristata	Orchidaceae	Dried stem	Excision, incision
7.	Sun flower	Helianthus annus	Asteraceae	Sees powder	Open
8.	sitaphal	Annona squamosa	Annonaceae	Dried leaves, seed powder	Ulcer, open & close
9	Adusa	Adhatoda vasica	Acanthaceae	Leaf extract	Chronic
10	Dhania	Coriandrum sativum	Umbelliferae	Leaves & dried seed powder	Chronic , open
11	Tea tree	Melaleuca alternifolia	Myrtaceae	Leaves	Chronic open
12	guarpatha	Aloe vera	Liliaceae	Herb	Mild burns , open
13	Teak	Tectona grandis	Verbenaceae	Leaves	Ulcer, open & closed
14	mulberry	Morinda citrifolia	Rubiaceae	Whole plant	Open
15	Vinca rosea	Catharanthus rosea	Apocynaceae	Whole plant	Closed
16	Onion	Allium cepa	Liliacaeae	Bulb extract	closed
17	Papaya	Carica papaya	Caricaceae	Latex fruit	open
18	salaparni	Desmodium gangaticum	Fabaceae	Whole plant	Chronic & excision
19	Lantana	Lantana camara	Verbenaceae	Whole plant	Open & excision
20	Banana	Musa saplentum	Musaceae	Fruit	Excision, incision ,ulcer
21	Tulsi	Ocimum sanctum	Labiateae	Leaves	Excision, incision
22	manjistha	Rubia cardifolia	Rubiaceae	Roots	Excision, incision
23	Balam kheera	Kigelia pinnata	Bignoniaceae	Bark , fruits	Chronic , acute, open & close

24	Broom weed	Scoparia dulcis	Scrophulariaceae	Leaves	Excision, incision
25	Bombay aloe,	Agave cantala	agavaceae	Leaves	Excision, incision,
26	Banayan tree	Ficus benghalen-sis	Moraceae	Bark , leaf	Open , closed
27	Sarwa wranvi-shapaka	Tephrosia purpu-rea	Leguminasae	Root , seeds	chronic , open
28	Bush tea	Hyptis suaveo-lens	Lamiaceae	Leaves	Chronic, open
29	Dhaman grass	Tridax procum-bens	Asteraceae	Leaves	Excision, incision
30	Chaulmugra	Hydnocarpus wightiana	Achariceae	Seed	Acute, chronic, &open

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