

A Review On Herbal Wound Healing Cream

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ABSTRACT

Wound are physical, chemical and also mechanical injury that results in an opening and breaking of skin. In response to the injury, wound healing is a complex process of tissue repair or remodeling. Wounds are a major cause of physical, chemical and mechanical disabilities. Normal wound healing can be adversely affected by many factors. The application of topical cream could expedite wound healing better than a moist dressing, as the former facilitates the repair process by maintaining the hydration levels of the affected skin.

KEYWORDS : wound healing cream, medicinal plant

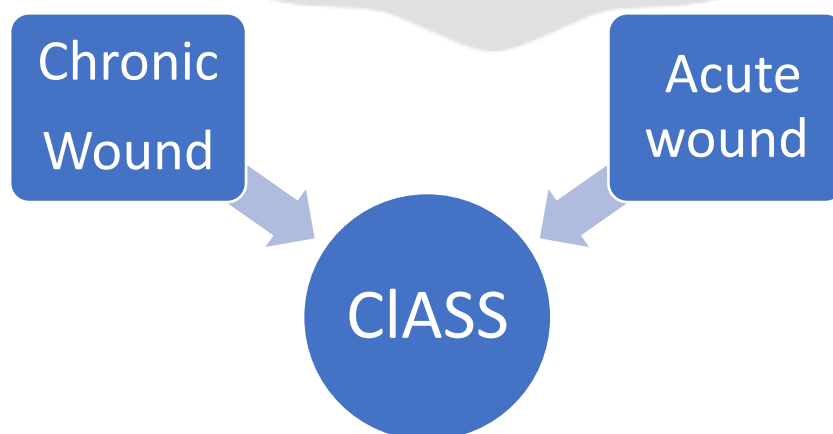
INTRODUCTION :

1. Wound are physical, chemical and also mechanical injury that results in an opening and breaking of skin.
2. Wound healing is a normal biological response to the injury that sets into motion a sequence of events.
3. Many medicinal plants have been reported to possess wound healing activity and found useful in treatment of wound. Wound healing in an intricate process where the skin repair itself.
4. The application of topical cream could expedite wound healing better than a moist dressing, as the former facilitates the repair process by maintaining the hydration levels of the affected skin.
5. Proper healing of wound is very essential restoration of disrupted anatomical continually and disturbed functional status of the skin. Healing requires the collaborative efforts of various tissues and cell lineages.

Importants Of Wound Healing Cream :

- 1) Important characteristics to be considered in wound healing are the wound contraction rate, granulation tissue breaking strength, as well as the collagen conten.
- 2) Penetrating moisture and nutrients to replenish all layers of skin.
- 3) It is used on cuts, scratches, or burns.
- 4) Creams are used as topical dermatological vehicles, and their influence on drug release and absorption.

Classification :



1) Acute wound :-

In acute wounds, there is tissue damage/injury that generally occurs through an orderly and time-reparative phase that results in the anatomical and functional integrity being restored sustainably. Acute wounds are typically caused by the cuts or surgical incisions.

Tissue damage is followed by rapid vessel contraction to prevent exsanguination from vascular injury.

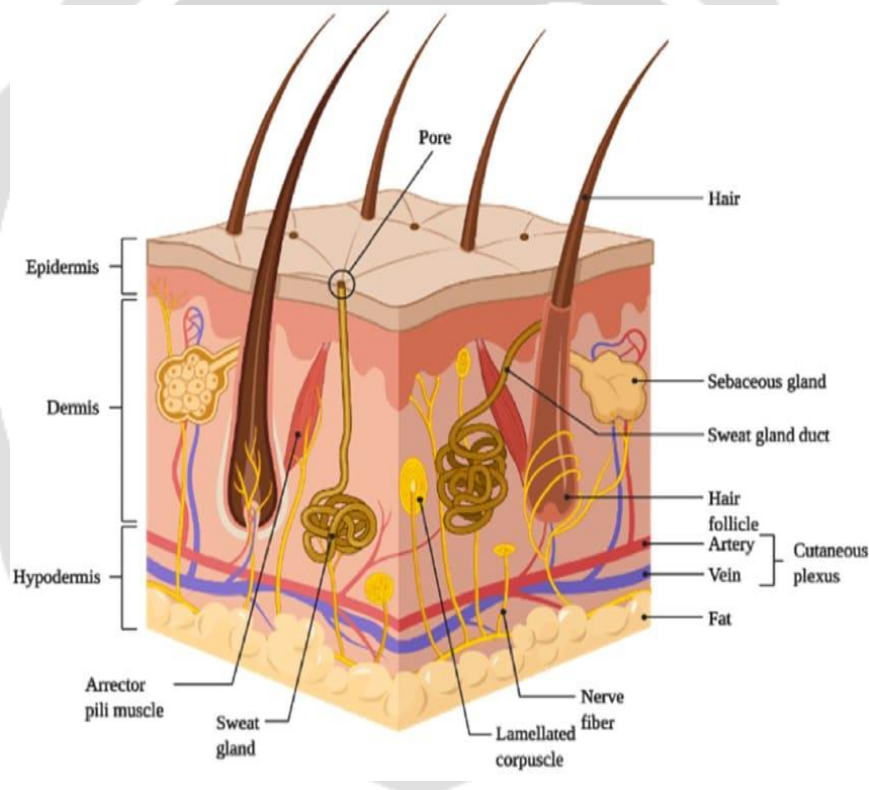
The acute wound is superficial mechanical injury from burns or trauma, and penetrating wounds from knife cuts or surgical incision. Wound repairing process is quick if the proper treatment such as dressing and medication is given.

2) Chronic wound :-

Chronic wounds are wounds that have not gone through the usual healing stages and hence reach a state of pathologic inflammation. They need extended healing time.

When wounds fail to proceed through this organized process, the healing of skin tissue delays, and this eventually results in chronic wounds.

Skin Anatomy :



The skin is like protective shield for our body.

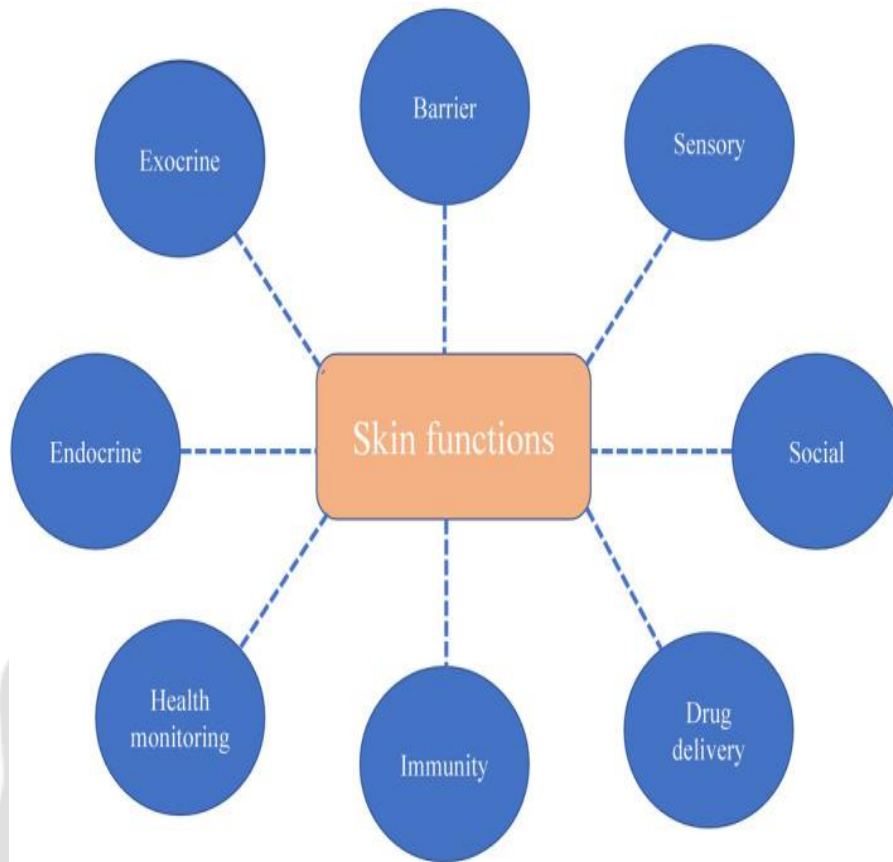
It has three main layers: the top layer (epidermis), the middle layer (dermis), and the innermost layer (subcutaneous tissue).

Epidermis (Top Layer): The cream helps the outermost layer of our skin, like a protective shield, by providing nutrients to heal small wounds like scratches.

Dermis (Middle Layer): Beneath the top layer, it contains blood vessels and nerves. Cream supports this layer's healing, especially for deeper wounds like cuts.

Subcutaneous Tissue (Innermost Layer): It made of fat and tissue. Cream helps rebuild this layer if the wound is very deep, ensuring overall skin strength.

Function Of Skin:



Components:

1. Aloe Vera
2. Curcuma Longa
3. Tulsi
4. Neem
5. Honey
6. Acacia

1. Aloe Vera



Fig 1 – Aloe Vera

Synonyms: Aloe, Musabbar.

Family: Liliaceae.

Benefits Of Aloe Vera

- It has a cooling impact on rashes or sunburns.
- Its anti-inflammatory effects can lessen pain, swelling, and soreness of wounds or injuries.
- Hydrate the skin with essential .
- Prevents premature ageing.

2. Curcuma Longa



Fig 2- Curcuma Longa

Synonyms: Haldi

Family : Zingiberaceae.

Benefits Of Curcuma Longa

- Skin health is improved.
- Potential relief from psoriasis.
- Aiding in wound healing.
- Antibacterial agent

3. Tulsi



Fig 3- Tulsi

Synonyms : Gauri, bahumanjari

Family : Lamiaceae

Benefits of tulsi leaf powder

- Promotes healthy skin ageing.
- Eases skin conditions including eczema.
- Vitamin K is a good source.
- Anti-aging benefits.

4. Neem



Fig 4 - Neem

Synonyms: Nimtree, margosa or Indian lilac

Family : Meliaceae

Benefits Of Neem

- It promote wound healing and maintaining skin elasticity.
- Neem has anti-inflammatory properties.
- Neem leaves have an antiseptic property.

5. Honey



Fig 5- Honey

Synonyms: Madhu, mel.

Family : Apidae

Benefits Of Honey

- Honey has been mainly used as a topical application on wounds for its anti- bacteria properties.
- Promotes drainage from wound.
- It is also used as wound dressing agent.

6. Acacia



Fig 6- Acacia

Synonyms : Babul , gum acacia

Family : Leguminosae

Benefits Of Acacia

- It contain anti-oxidant , anti- microbial property.
- It help in wound healing.

Mechanism Of Wound Healing :

When the skin surface is broken and a wound is formed then mechanism of wound healing get starts. The healing process include three successive phases i.e. inflammation, proliferation and remodeling. The process of healing begins with homeostasis and monitoring blood loss to prevent microbes from entering the wounded area.

Methodology :

Collection of plants material :

From the neighbourhood botanical garden, turmeric, acacia auriculiformis, aloe vera, and tulsi were harvested. There is no disputing the fact that drugs are properly collected when they have the highest concentration of active components, regardless of the type of crude drug or the location of collection. When collecting crude medications, the benefits of the current environmental conditions are also taken into account. However, when collecting natural drugs on a commercial scale, special emphasis should be given to the employment of professional workforce. Rhizomes are harvested when they have a sufficient supply of reserve food and have the highest concentration of chemical constituents.

Extraction process Preparation of turmeric extract:

Stir 1 g of turmeric powder with 10 ml of distilled water in a 250 ml volumetric flask that has been heated in a water bath for 5 to 10 minutes at 80°C to 100°C. After filtering it, turmeric extract is produced.

Preparation of aloe-vera extract:

Pick an aloe vera leaf from the plant that is mature and fresh, then wash it with distilled water. It is hot air oven dried. Leaf longitudinally cut with a clean knife. Aloe vera that is semi-solid is gathered. Take out the fibres and contaminants. Extract from aloe vera is obtained.

Preparation of tulsi extract:

Tulsi leaves were gathered, cleaned with distilled water, then dried in an oven using hot air. The leaves were then ground up after a thorough drying process. Then a volumetric flask was filled with 1 g of tulsi leaf powder and 10 ml of dimethyl sulfoxide. The solution was then boiled in a water bath at 80°C to 100°C for 5–10 minutes before being filtered through filter paper and tulsi leaf extract.

Preparation of acacia extract:

Plant extract was created using the maceration procedure. After being air dried at room temperature, clean leaves were ground into a coarse powder. Petroleum ether was used to defatify, the powdered dry leaves of *Acacia auriculiformis*, and then chloroform, ethyl acetate, acetone, butanol, and methanol were used to extract them.

Conclusion :

The cream demonstrated wound healing effects from the usage of turmeric, aloe vera, *Acacia auriculiformis*, and tulsi, and all of the herbal constituents showed various noteworthy actions. The use of bioactive ingredients in cosmetics affects the biological processes of the skin and supplies it with the nutrients it needs to be healthy. The produced herbal cream has the best qualities and offers nutritional benefits while using less chemicals to protect the skin from a variety of skin problems. The cream is inexpensive since it was made with basic materials and a straightforward process. The herbal cosmetic mixture can be used to provide a barrier to protect skin and is safe for use.

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