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## Research Article

### EFFICACY OF UNANI FORMULATION *MARHAM-E-EJAZ* IN THE MANAGEMENT OF NON-HEALING ULCER: A CASE REPORT

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#### ABSTRACT

Background and Aim: A Non-healing ulcer is defined as an ulcer that does not heal after 6 weeks of conservative therapy. It is estimated that 1-2% of the people of the world experience a chronic wound during their lifetime. There is direct impact on the physical (amputation), psychological (depression) and social life of individual. Present study was carried out to assess the acclaimed effect of Unani formulation *Marham-e-Ejaz* in a patient. Material And Method: A female patient of Non-healing ulcer presented in the surgery OPD of our institute. She presented with a chief complaint of wound at the right elbow joint. The diagnosis made was post burn wound. The wound had a history of more than 9 month. The case was treated with Unani Topical formulation, *Marham-e-Ejaz* for 30 days. The formulation was applied after cleaning it with Normal saline, dressing was changed after every alternate day. The wound was assessed for pain, discharge, size and depth of wound at 0<sup>th</sup>, 15<sup>th</sup>, 30<sup>th</sup> day. Result: On the first day wound size was 2 square cm, depth 0.2 cm, and the floor filled with pale granulation tissue. On 30<sup>th</sup> day ulcer was completely healed with 100% epithelization. Conclusion: It was observed that there was significant healing of the ulcer. So, *Marham-e-Ejaz* has potential efficacy in healing Non-healing ulcer.

**Keywords:** Non-healing ulcer, *Qurūh*, *Mujaffif*, Unani formulation, *Marham-e-Ejaz*

#### INTRODUCTION

A Non-healing ulcer is defined as an ulcer that does not heal even after 6 weeks of conservative treatment. It is estimated that 1-2% of the people of the world experience a chronic wound during their lifetime in developed countries. In the USA Chronic wound are reported to affect 6.5 million patients. Based on causative aetiologies the wound healing society classifies chronic wounds into 4 categories Pressure ulcer, Diabetic ulcer, Venous ulcer, and Arterial ulcer<sup>1</sup>. Burn is an injury to the skin caused by heat or due to radiation, electricity and contact with chemicals. These can include thermal burns, which are caused by contact with flames, hot liquids, hot surfaces, as well as chemical and electric burns. An estimated 1,80,000 deaths every year all caused by burns. Non-fatal burns are main cause of morbidity, including prolonged hospitalization, disfigurement, and disability. Burns are among the main causes of disability-adjusted life-years (DALYs). In India, over millions of people are severely burnt every year. India has an estimated annual burn incidence of 6-7 million, based on data from major hospitals, and burn injuries are also the second largest group of injuries after road accidents<sup>2</sup>.

Hippocrates the father of medicine had a leg ulcer. He was managing the wound by using various kinds of boiled herbs mixed with wine used as a cleansing agent. He also used various kinds of salts, oxides of copper, and lead was also used to dry and soothe the wound<sup>3</sup>. *Jarāḥat* (wound) is described as the *Tafarruq-e-ittiṣāl* of *lahm* (wear and tear of muscle) free from pus. It is a severe *Tafarruq-e-ittiṣāl* in any part of the body, especially in those structures which are soft and delicate. *Qurūh* (ulcers) according to the Unani system of medicine are *Tafarruq-e-ittiṣāl*

of *lahm* (wear and tear of muscle) is associated with pus formation in it. *Qurūh* (ulcers) can be classified into 3 categories:

*Qurūh-e-Baseet* (simple ulcer): The ulcer is free from those factors which may delay the healing process.

*Qurūh-e- Murakkab* (compound ulcer): The ulcer which is associated with pain, suppuration, and blackening of surrounding tissue.

*Qurūh-e-Aseer-ul-Indimal* (Non-healing ulcer): Ulcer that does not show any tendency towards healing and is associated with more damage and destruction of tissues<sup>3-7</sup>. There are several formulations in the Unani system of medicine for non-healing ulcers. *Marham-e-Ejaz* was selected for the present case report.

#### MATERIALS AND METHODS

Selection of case- A diagnosed patients with non-healing ulcers was taken for the study from Surgery OPD of the Unani hospital. The treatment was started after taking written informed consent from the patients.

**Marham-E-Ejaz:** The Ointment was prepared in the pharmacy of the Institute according to procedure guidelines of National Formulary of Unani medicine <sup>4</sup>. It has got *Kath Safaid* (white catechu/ Acacia Catechu) 4 parts, *Raal Safaid* (Shorea robusta/Sal tree) 4 parts, *Shibbe Yamani* (sulphate of alumina/alum) 1 Part, *Tutiya sabz* (copper sulphate) one part, water 4 parts, and *Roghan-e-kunjad* (sesame oil) 4 parts as ingredients. First *Kath Safaid*, *Raal Safaid*, *Shibbe Yamani* and *Tutiya sabz* were finely ground and sieved to make *safoof* (Powder), then Oil and water were

mixed in a vessel and sieved. Fine powder of all the above ingredients was added in the oil and water mixture in a vessel and stirred to make *Marham* (Ointment) <sup>8</sup>.

**Procedure:** The initial step of the treatment was that the wound was cleaned with normal saline and dressed with *Marham-e-Ejaz* on alternate days under all aseptic precaution. Debridement of the wound was done as per the need, to remove dead tissues. No oral or topical antibiotics were used during the of study. Wound healing was assessed on 0, 15<sup>th</sup>, 30<sup>th</sup>, and 45<sup>th</sup> days on the basis of pain (VAS scoring), discharge, number of wounds, and area of the wound in a square centimeter, appearance of healthy granulation tissues, epithelization in percentage and depth of wound in centimeters.

**Duration Of Study:** 45 days

## RESULTS

**Case Presentation:** A 40-year-old female patient came Surgery OPD with the complaint of a post burn wound on the right elbow joint for last 9 months.

According to the statement of the patient she worked as a welder and was well before 9 months then she had an accidental injury of petrol fire at her work place and got injured at her right elbow. Due to lack of proper treatment, she developed vesicles at the site of burn which eventually bursted to form a wound after 2-3 days of injury, which was associated with severe burning pain. She took treatment at multiple care centres but had no relief. The patient had no comorbidities and there was no history of smoking/alcohol/drug/ tobacco chewing.

**Table 1: Findings of a local examination of a Non healing ulcer post burn.**

Examination	Findings
<b>Inspection</b>	
Site	Below the Rt Elbow joint
Size	2x 1cm
No. of wound	One
Shape	Oval
Margins	Hypopigmented
Floor	Pale granulation tissue present
Discharge	Yellow
Smell	foul
<b>Palpation</b>	
Local temperature	Not raised
Tenderness	No
Depth	0.5cm
Margins	Indurated
Base	Mobile
Bleeding on touch	Absent

**Table 2: Assessment of healing in post burn Non healing wound using Unani formulation *Marham-e-Ejaz***

Assessment parameters	Day 0	Day 15	Day 30
1.Size in sq.cm	2	1	0
2.No. of wound	1	1	0
3.Granulation tissue in %	50 %	100%	Nil as wound healed
4.Epithelization in percentage	0	50%	100%
5. Depth	0.2cm	0.1cm	0
6.Pain (VAS)	4	2	0
7.Discharge	Moderate	Scanty	Absent



**Figure 1: Healing in post burn non healing ulcer by *Marham-e-Ejaz*, an Unani formulation**

**Assessment:** On the first-day wound size was 2 sq. cm, depth 0.2 cm, and the floor filled with pale granulation tissue with foul smell, pain according to VAS scoring was 8. Pain was completely relieved after 30<sup>th</sup> day and no pain no foul smell. Complete

granulation was observed with in 15 days. The wound filled up with flesh on 30<sup>th</sup> day. On examination, the following observations were noted.

## DISCUSSION

A Non-healing ulcer is defined as an ulcer that does not heal after 6 weeks of conservative therapy. They have poor granulation tissue formation, altered cell cycle, biochemical imbalance. Studies have shown that chronic wounds have elevated level of inflammatory cytokines and matrix metalloproteinases. The increased concentration of matrix metalloproteinases is enhanced by the associated decrease in protease inhibitors<sup>9</sup>. Chronic wound is difficult to treat and take time and patience. Debridement of the wound, careful cleaning and dressing change have been the only hope in advancing healing. Negative pressure device, recombinant growth factors, hyperbaric oxygen are some methods that have been used to assist in wound healing. Chronic wound develops when normal healing mechanism are not capable of repairing the tissue injury, they include both systemic and local factors. Malnutrition, uraemia hyperglycaemia, are example of systemic factors that retard healing, oedema, Infection, Arterial insufficiency and pressure on wound are example of local factors can impair healing<sup>9</sup>. According to Unani literature *Marham-e-Ejaz* is used for non-healing ulcers to gain quick healing. It cleanses the dead tissues (slough) and helps in growth of healthy tissue. It also possesses antiseptic action. The ingredients individually have been reported for pharmacological actions that aid in wound healing.

Sesame Oil is obtained from the seeds of *Sesamum indicum*. It contains glycerides of oleic 43%, linoleic acid 43%, palmitic 9% stearic 4%, lignan sesamin 1% and myristic acid. Externally it is act as emollient and soothing agent for inflamed surface. It is used to soften skin and crusts. It is claimed having *Muħallil waram* (anti-inflammatory) and antiseptic action. Sesame Oil active ingredients sesamin and sesamol have antioxidants, antimicrobial and anticancer activity<sup>10</sup>. Mom (Bees Wax) is an important content of the *Marham*. It improves the action of other content in the *Muħallil Marham*. It is used as a preservative in *Marham*. It also acts as *Mulayyin and Muħallil -e-waram* (Anti-inflammatory)<sup>10-14</sup>. It is reported for wound healing action<sup>11</sup>. *Shibbe Yamani* (sulphate of alumina/alum)-acts as a *Mujaffif-e-ratubat* (Desiccative), *Hābis-i-Dam*(hemostatic), *musakkīn-ialam* (analgesic), *Dāf'-e-Ta'affun* (antiseptic), *Jālī*(detergent)<sup>10-14</sup>. *Tutiya Sabz* (copper sulphate)-*akkāl* (removes dead tissue and slough) *mujaffife-e-Qurūh*, *Dāf'-e-Ta'affun* (antiseptic) *Muṣaffī-e Dam*<sup>10-14</sup>. The body of a 70-kg healthy individual has about 110 mg of copper, 50% of which is found in the bones and muscles, 15% in the skin, 15% in the bone marrow in the skin, copper a) stimulates dermal fibroblasts proliferation upregulates collagen (types I, II, and V) and elastin fibre components (elastin, fibrillin) production by fibroblasts. *Raal Safaid* (*Shorea robusta*/Sal tree)- *Dafi'-i-Ta'affun*(antiseptic) *Mujaffif-e-Qurūh Mudammil-e-Qurūh* (wound healing)<sup>10-14</sup>. *Kath Safaid* (white catechu/ Acacia Catechu)- contain flavonoids (catechin, rocatechin, epicatechin, quercetin), alkaloids (taxifolin), tannins (gallic acid) glycosides (poriferasterol) active constituents responsible for antimicrobial activity for both gram negative and gram-positive bacteria such as *Escherichia coli*, *staphylococcus aureus*, *klebsiella pneumonia*, *salmonella typhi*, *shigella flexneri*, *pseudomonas aeruginosa* and *salmonella typhi*<sup>18</sup>. *Qabiz*, *Hābis-i-Dam* (hemostatic) *Dāf'-e-Ta'affun* (antiseptic) *Mujaffif-e-Qurūh*, *Muṣaffī-e Dam*(blood purifier)<sup>10-14</sup>.

According to the Unani system of medicine the action of the drugs presents in *Marham-e-Ejaz* favorable for the treatment of non-healing ulcer. Complications of VAC therapy include failure of the VAC system, wound infection, pain, bleeding, allergies to the adhesive drape, excoriation of the skin, restricted mobility, adherence of the tissues to the foam, lack of patient compliance and skin necrosis Hyperbaric oxygen therapy, ultrasound and

electromagnetic therapy, negative pressure wound therapy (VAC), topical application of platelet derived growth factors (PDGF), skin grafting all common measure used for healing of the ulcer<sup>19</sup>. Side effects of hyperbaric oxygen therapy is middle ear barotrauma, rupture of tympanic membrane, paranasal barotrauma, pulmonary barotrauma, claustrophobia and CNS toxicity<sup>20</sup>. It is too costly and have certain limitations. So, treatment through local application of *Marham-e-Ejaz* is very simple, cheap and convenient.

## CONCLUSION

The Unani formulation *Marham-e-Ejaz* as a local application shown good result in the healing ulcer. It is easily available, cheap and very effective in non-healing ulcers. It removes dead tissue slough and helps in the growth of healthy granulation tissue and epithelization. This case report strategy Recommends for taking it up for further studies to dealing *Marham-e-Ejaz* as an effective drug for non-healing ulcer.

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