



EVALUATING THE EFFICACY OF MARHAM-E-RAAL IN VENOUS ULCER MANAGEMENT: A CASE STUDY

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Abstract:- Venous ulcers are notoriously challenging to heal and significantly impact patients' quality of life. We present the case of a 22-year-old male with no comorbidities, whose condition was effectively managed using a combination of Unani and modern wound care protocols. The open wound demonstrated complete healing within 7-8 weeks, achieved through the local application of Marham-e-Raal and consistent sterile dressing changes with regular aseptic precautions.

Keywords :- Venous ulcer, marham-e-raal, deep vein thrombosis(DVT), Qurooh.

INTRODUCTION:-

Venous ulcers and deep vein thrombosis (DVT) are significant medical conditions that contribute to substantial morbidity, reduced quality of life, and increased healthcare costs worldwide. Venous ulcers, also known as venous leg ulcers (VLUs), are chronic wounds that occur due to venous insufficiency, often resulting from impaired blood flow in the lower extremities. These ulcers are characterized by slow healing rates, high recurrence, and a profound impact on patients' physical and emotional well-being. Studies estimate that venous ulcers account for 60-80% of all leg ulcerations, with a pooled prevalence of 0.32% and an incidence of 0.17% globally¹. The

condition is particularly prevalent among older adults, individuals with obesity, and those with a history of DVT or chronic venous insufficiency¹.

Deep vein thrombosis, on the other hand, is a critical condition characterized by the formation of blood clots within the deep veins, most commonly in the legs. DVT is a major component of venous thromboembolism (VTE), which also includes pulmonary embolism (PE). It is the third most common cause of cardiovascular-related mortality, following heart attacks and stroke². The annual incidence of DVT is approximately 1.6 cases per 1,000 individuals, with up to 900,000 people affected annually in the United States alone^{2,3}. Risk factors for DVT include hospitalization, surgery, cancer, pregnancy, and prolonged immobility, with up to 70% of healthcare-associated cases being preventable through appropriate interventions^{1,3}.

Both venous ulcers and DVT are interconnected, as DVT is a leading cause of chronic venous insufficiency, which can subsequently lead to venous ulcer formation. Post-thrombotic syndrome, a long-term complication of DVT, affects one-third to one-half of patients and often manifests as pain, swelling, and skin changes, further increasing the risk of ulcer development^{2,3}. The economic burden of these conditions is substantial, with venous ulcer treatment alone costing billions annually in healthcare systems worldwide¹.

Understanding the epidemiology, risk factors, and interrelationship between venous ulcers and DVT is crucial for improving prevention, diagnosis, and treatment strategies. This article aims to provide a comprehensive overview of these conditions, highlighting their prevalence, pathophysiology, and the need for integrated care approaches to reduce their global burden.

Precipitating factors :-

Venous hypertension, small-vessel disease, tumour, trauma.

PATHOPHYSIOLOGY:-

Venous anatomy and physiology

A thorough understanding of venous anatomy is essential for gaining deeper insights into the mechanisms and progression of chronic venous disease. The venous structure of the lower extremities

can be categorized into superficial and deep systems. Superficial veins (e.g., greater saphenous vein, lesser saphenous vein and accessory saphenous vein) are located between the dermis and the muscle fascia, whereas deep veins (e.g., femoral vein, common femoral vein, deep femoral vein, popliteal vein, anterior and posterior tibial vein) are located beneath the muscle fascia^{4,5}.

Obstruction

Obstruction is an important factor in the pathogenesis of venous ulcers. Proximal venous obstruction has a higher prevalence in chronic venous disease and implies poorer outcomes in treatment⁶. Marston et al.⁷ reported the importance of identifying venous obstruction in venous ulcer patients. Though frequently occurring in post-thrombotic veins, venous obstruction is difficult to detect non-invasively and thus often goes unnoticed. Intravascular ultrasound has proven its efficacy in assessment of the degree and extent of iliac vein stenosis compared to ascending phlebography which had previously been considered the standard⁸.

Genetic factors

Genetic mutation can be a predisposing factor for developing venous ulcers. Factor XIII is an important element for the formation of a fibrin matrix wound cover, further initiating a cascade of fibroblast growth and migration. Mutation in the *F13A1* gene which encodes Factor XIII is known to be associated with increased size of venous leg ulcers and delayed wound healing⁹. A recent publication by Anwar et al.¹⁰ summarized genetic mutations associated with poor healing or progression of venous ulcers.

PATHOGENESIS:-

Venous stasis theory

Introduced in 1917 by Homans¹¹, The term "postphlebotic syndrome" was historically used to describe the underlying cause of venous ulcerations. Drawing on earlier research, Homans identified two key factors: damaged venous valves and dilated vein walls, which he proposed as central contributors to venous stasis. He further

hypothesized that this stasis results in hypoxia (oxygen deprivation) in the surrounding tissues, ultimately leading to the development of ulcerations.

Arteriovenous fistula theory

Blalock¹² proposed the arteriovenous fistula theory to explain hypoxia in chronic venous insufficiency (CVI). By comparing blood samples from the femoral vein, greater saphenous vein, and varicose veins in CVI patients with those from healthy limbs, he found higher oxygen levels in the proximal veins of affected limbs. This led him to hypothesize that venous ulcers resulted from increased blood flow due to arteriovenous fistulae, rather than venous stasis, offering a new perspective on CVI pathophysiology.

Clinical Presentation and Diagnosis

The diagnosis of venous ulcers is generally clinical; however, tests such as ankle-brachial index, color duplex ultrasonography, plethysmography, and venography may be helpful if the diagnosis is unclear.

Venous stasis typically manifests as a persistent, dull ache or pain in the lower extremities, accompanied by swelling that improves with elevation, eczematous changes in the surrounding skin, and the presence of varicose veins². Venous ulcers frequently develop over bony prominences, particularly in the gaiter area (over the medial malleolus). The recurrence of an ulcer in the same location is strongly indicative of a venous ulcer.

On physical examination, venous ulcers are generally irregular in shape and shallow (Figure 1). The base of the ulcer often exhibits granulation tissue and fibrin deposits. Additional findings may include varicose veins in the lower extremities, edema, and venous dermatitis, which is associated with hyperpigmentation and hemosiderin or hemoglobin deposition in the skin. Lipodermatosclerosis, characterized by thickening and fibrosis of the subcutaneous adipose tissue, may also be present. These clinical features collectively support the diagnosis of venous insufficiency and its complications.

A clinical severity score based on the CEAP (Clinical, Etiology, Anatomy, and Pathophysiology) classification system is a valuable tool for assessing chronic venous disorders. The highest CEAP severity score is assigned to patients with active, chronic venous ulcers that have persisted for more than three months—particularly those lasting over 12 months—and are large in size, typically exceeding 6 cm in diameter. This scoring system helps clinicians evaluate the severity of the condition and guide appropriate treatment strategies¹⁴.

Case discussion :-

A 22 years old male with nill comorbidities of Hypertension, diabetes, hypothyroidism or dyslipidemia's and not on not any regular medications. He came to outpatient department with H/O Non-traumatic, non-healing ulcers over the left foot dorsum and lateral malleolus since 5-6 months . 1 month back he underwent debridement. But didn't got any improvement.

On examination patient is conscious, oriented with normal blood pressure and normal blood sugar levels.

Local examination suggestive the wounds exhibited signs of exudate discharge, which was yellow-white in color. Peripheral pulses in the left leg, including the dorsalis pedis, anterior tibial, and posterior tibial arteries, were palpable and normal. Proprioception was intact; however, there was decreased sweating and temperature sensation in the periwound area. No restriction of ankle joint movement was observed.

Inspection :- Venous ulcers over the left foot dorsum and lateral malleolus.

1. Size:- 2.4×2.1×1.9cm(left foot dorsum) , 2.2×2.0×1.8cm
2. Shape & edges:- Irregular, shallow, with well-defined edges
3. Discharge:- Exudate discharge
5. Surrounding area: erythematous with scaling, irregular shaggy borders.

Palpation :- Induration (firmness) of the surrounding skin due to edema, warmth, tenderness over affected veins, with potentially palpable varicose veins.

Mobility:- Reduced mobility.

Bleeding :- On gentle palpation on deep it bleeds.

Relevant clinical examination:- No

Regional lymph nodes:- NAD

Peripheral pulses and sensation are intact.

Function of the joint :- Not Restricted.

Systemic examination:-

RS- BLAE+, No added sounds,

CVS- S1S2 + no murmurs

P/A- Soft, Non-tender, No Organomegaly

CNS- NAD.

DISCUSSION:-

Venous ulcers, which are associated with neuropathy, ischemia, and venous hypertension, require specialized care. A comprehensive understanding of the lesion's etiopathology is essential for guiding accurate diagnosis and effective treatment, thereby minimizing the risks associated with delayed diagnosis or inappropriate management. Scientific evidence strongly supports the use of compression therapy as a safe and effective treatment for mixed-origin ulcers. Compression therapy has been proven to significantly reduce edema and exudate, enhancing healing outcomes and improving patient quality of life.

In this case presentation of the wound is initially debridement done after that doing daily dressings under sterile condition with topical application of antiseptic, anti microbial and enzymatic debriding agents alternatively Marham-e-raal applied. Patient had a exudate discharge from the wounds, Which were advised orally musaffiyat and along with supportive and symptomatic treatment done.

In this case, the wounds was initially managed with debridement, followed by daily dressings under sterile conditions. Topical applications of antiseptic, antimicrobial, and enzymatic debriding agents were used alternately, along with the application of Marham-e-Raal. The patient presented with exudate discharge from the wound, for which oral Musaffiyat was prescribed. Supportive and symptomatic treatments were also administered as part of the comprehensive care plan¹⁵.

This highlights the need for an efficient system and structure to ensure appropriate evaluation, patient compliance, and the delivery of proper care. The involvement of patients and their support systems significantly improves outcomes. Throughout the process, the patient became more aware of the importance of self-care. After seven weeks of treatment, complete healing of the left foot has been achieved.

CONCLUSION:-

It can be concluded that the local application of *Marham-e-Raal*, along with antimicrobial, antiseptic, and enzymatic debriding agents, is highly effective in the management of venous ulcers. These treatments not only promote healing but also address infection control and wound debridement, which are critical for optimal recovery. Implementing a structured care program tailored to the specific needs of these patients can significantly reduce the risk of devastating complications, improve quality of life, and enhance overall outcomes. Such an approach underscores the importance of integrating traditional and modern therapeutic strategies in the management of chronic venous ulcers.



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Week-5



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