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Case Report

Supportive Bio-Occlusive Alginate Dressing with Medical Chestnut Honey in Necrobiosis Lipoidice Treatment

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Abstract

Necrobiosis lipoidica is a rare and idiopathic disorder of collagen degeneration presenting with granulomatous response [1]. The main complication is ulceration that usually occurs after trauma, mostly in patients with diabetes mellitus [2]. The disease has variable progression and scarring but is typically chronic with small risk of SCC developing in longstanding lesions [3]. The disease course appears more severe in men as they have a higher risk of ulceration in the lesions, reported in 58% of males. On the other hand only 15% of females are hit with this scenario. Histopathologically, thickening of blood vessel walls and fat deposition are seen [2]. Direct immunofluorescence microscopy shows IgM, IgA, fibrinogen, and C3 in the blood vessels causing vascular thickening [4]. Most treatments are not very satisfactory [5]. One of the few methods than have been successful are injections of steroid into the active inflamed borders or local potent steroid [6]. To certain individuals PUVA treatment can be beneficial.Calcineurin inhibitors have anti-inflammatory and immunomodulatory effects which can help in treatment of necrobiosis lipoidica [7]. Topical tacrolimus has been shown to be effective in resolving ulceration associated with necrobiosis lipoidica [8]. The monoclonal antibodie infliximab and etanercept- fusion protein made up of the Fc portion of human IgG, have been found to be effective as monotherapy for ulcerating necrobiosis lipoidica [9].

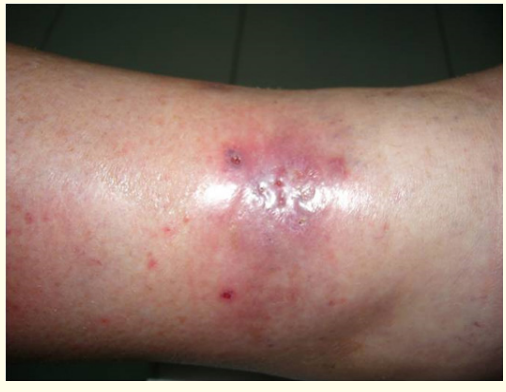
Keywords: Necrobiosis Lipoidica; Diagnosis; PUVA Therapy

Case Presentation

A 45-year-old female diabetic patient was admitted to our department with a 10-year-history of deep secreting chronic wounds with large fibrotic layers on both shins. She developed fever with high inflammatory parameters. Pseudomonas aeruginosa was isolated in the biopsy sample. Histopathology confirmed superficial and deep perivascular and interstitial granulomatous dermatitis with palisade granuloma, therefore excluding the diagnosis of SCC.

Results

Ulcerations have a high risk of developing secondary bacterial infection which postpones wound healing. According to antibiogram, she was treated parenterally with meropenem. Locally antiseptic dressings were applied and enzymatic debridement was performed. Sterile primary alginate wound dressing impregnated with medical chestnut honey was used. Two weeks later the wound defect was filled with granulation tissue, swelling and erythema were reduced as well as secretion, fetor and pain, resulting in sterile wound swap. Afterwards, in total 5 applications of intralesional corticosteroids were injected every 3 weeks which resulted in complete epithelization. After a year she relapsed and due to her 20-year-old history of diabetes, we consulted with endocrinologist and decided to start PUVA therapy, providing long term remission.



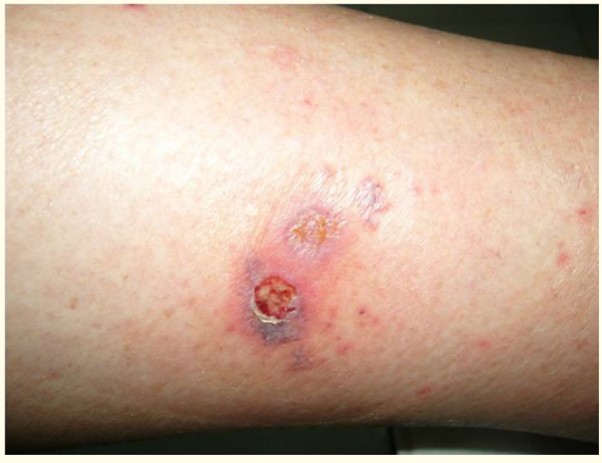


Figure 1

Conclusion

Necrobiosis lipoidica has an increased prevalence in individuals with diabetes [10]. Due to variations in the appearance, depending on the stage and site of the lesions, diagnosis can be difficult to make. This report presents an example of the management with systemic antibiotics due to ulcer colonization. When ulcerations are present, proper wound care principles are essential. First-line therapy includes potent topical and intralesional steroids. Bio-occlusive alginate dressings impregnated with medical chestnut honey proved to stimulate cleansing of fibrotic layers and to accelerate granulation and epithelisation [11].

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