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Case Report

Chronic Ischemic Ulcer Myiasis

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Case report with images and video description

Wound Myiasis is a parasitic infestation of the wound by fly larvae; the female flies lay their eggs on the open wound which may take 8-24 hours to hatch.[1] Low socioeconomic status, poor hygiene, and exposed neglected wounds are the most common risk factors for acquiring myiasis.[1] Thus, the larval infestation is usually considered a complication of low-quality chronic ulcer care.[1] Wound Myiasis it is a rare infestation. However, human myiasis was reported in many primary care clinics in the United States.[2] We report the case of 61 years with past medical history hypertension, peripheral vascular disease, and end stage renal disease on hemodialysis who presented to ED with right foot pain and dorsolateral wound for two weeks before admission. The right foot wound was heavily infested with maggots with no evidence of local signs of secondary bacterial infections (figure 1); (Video 1). Magnetic resonance imaging (MRI) of the right foot showed osteopenia, and subacute fracture involving the proximal phalanx of the fourth toe but no osteomyelitis or abscess. Angiography of the right foot showed a poor flow to lower leg. The patient was treated with wound debridement, maggots' removal, local wound care, and IV vacnomycin and zosyn for total of 7 days (figure 2). However, blood and wound cultures did not grow any organism. The wound healed uneventfully after this course of treatment. Management of chronic ulcers is usually challenging and needs multidisciplinary team collaborations. Therefore, over the last decade, after FDA approval in 2007 maggot debridement therapy (MDT) have been implemented as a novel biological approach in wound management.[3, 4] Maggot therapy can be used as a bridge to surgical debridement procedures, or as the primary debridement modality when surgical debridement cannot be performed.[5] MDT can also reduce the duration of antimicrobial therapy in some patients.[6] Three proposed actions are responsible for the therapeutic effects of MDT.

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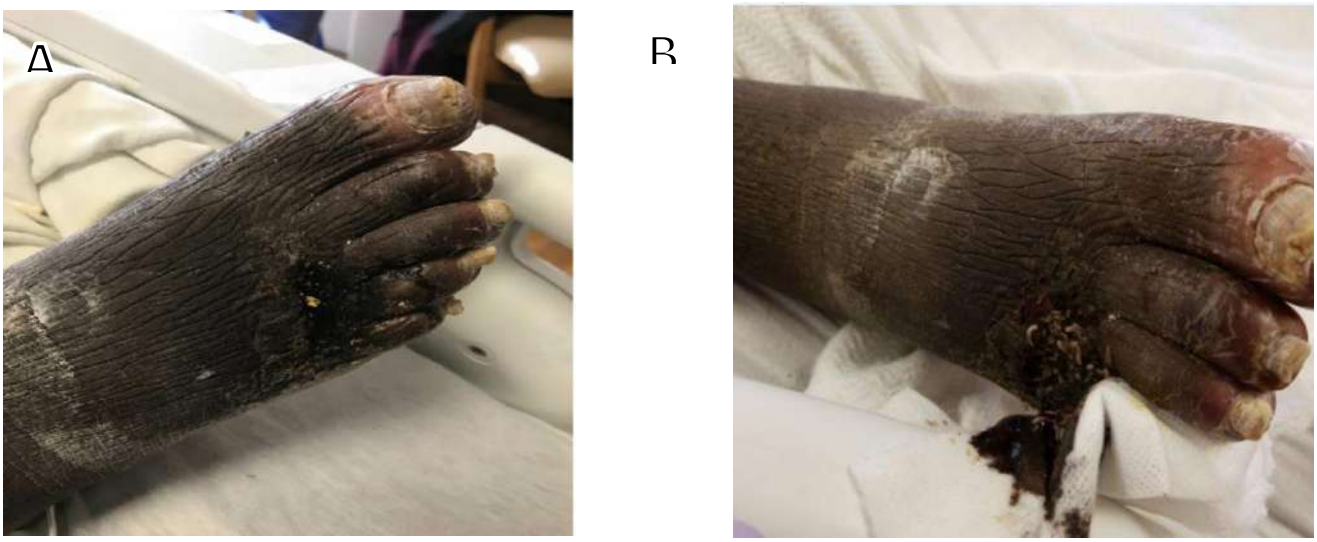

Fig 1. Showed 5x3 cm wound infected with maggots in dorsal-lateral aspect of the right foot (A) before wound examination; (B) after wound examination and removal of fibrotic exudate covering the wound.

First, maggots can secrete proteolytic enzymes that liquefy necrotic tissue, which is eventually get ingested by larvae.[3] Second, maggots have an antimicrobial action with enhanced bacterial biofilm eradication.[7] Finally, larvae can promote wound healing and stimulate granulation tissue growth.[8] Our patient's circumstances of poor hygiene, neglect, and peripheral vascular disease substantially increased his risk of secondary bacterial wound infection. However, the presence of the associated larvae infestation had a natural wound debridement effect and helped to prevent bacterial infection.

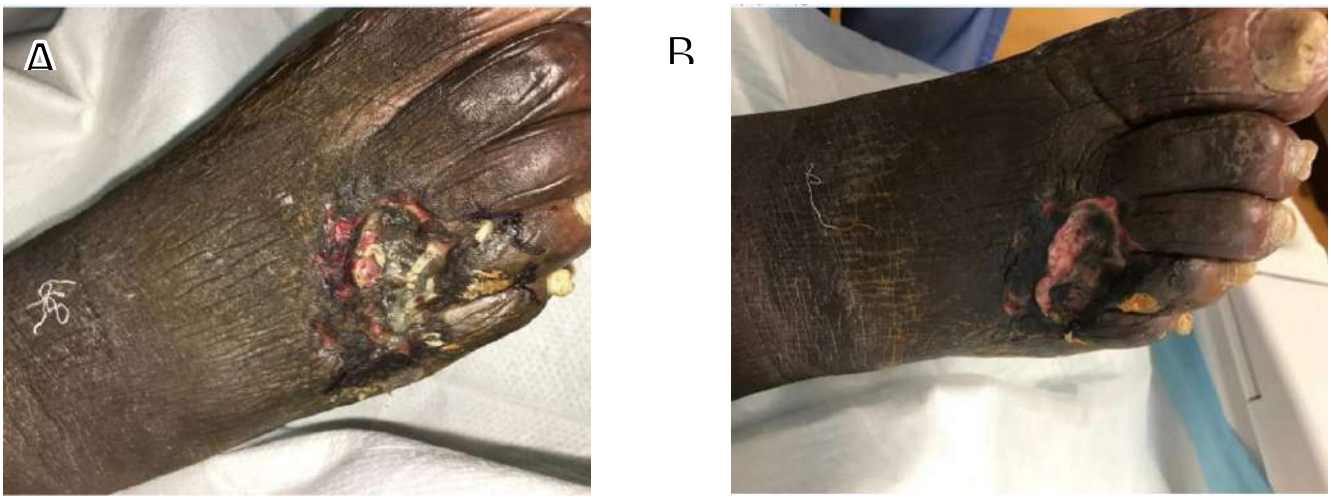

Fig 2. Showed the patient's right foot wound following surgical debridment (A) day one following the debridment ; (B) day two following the debridment.

Video MDT.mp4

Video 1: showed the patient's right foot wound infected with maggots.

Conflict of interest

The authors have declared that no conflict of interest exists.

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Patient consent obtained.

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