Necrotizing Fasciitis in a Type II Diabetic Patient: A Limb Salvage Case Report

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Introduction- Necrotizing fasciitis is a severe progressive soft tissue infection involving the subcutaneous fat and deep fascial layers (3). It results in extensive tissue necrosis (7). It has also been associated with a mortality rate of about 50% (5). Patients typically present with non-specific symptoms hard to differentiate from cellulitis or an abscess (8). Tissue crepitus or bullae and toxic patient condition, which are distinguishing factors of necrotizing fasciitis, are not always seen early in the course of the infection (6). Diabetes is one of many risk factors that increases mortality for a patient with necrotizing fasciitis (4). Diabetes affects microvascular circulation limiting blood supply to superficial and deep structures because the capillaries become "sugar coated" (3). This limitation of blood supply decreases the concentration of antibiotics in the surrounding tissue and therefore debridement is crucial in the treatment course (3). Necrotizing fasciitis is most often polymicrobial, so early broad spectrum antibiotic use is a mainstay of treatment for these patients (5).

Patient Information- 49 yo diabetic male presented to the ED complaining of a blister on the plantar aspect of his right foot after running in a 5K race. Pt was given supplies for dressing changes and told to follow-up with podiatry. Pt presented to the podiatry clinic 3 days later where he had a 7cm x 2cm wound on the plantar aspect of his right foot with mild cellulitis. Pt was placed on Doxycycline and Ciprofloxacin and once again daily dressing changes. Pt followed-up with podiatry 3 days later and he complained he had been running a fever and that he was compliant with antibiotics and dressing changes (Image 1). His blood sugar was checked in clinic and found to be over 500. Pt was admitted to the hospital for IV antibiotics and surgical intervention.

Diagnosis- Diabetic necrotizing infection.

Treatment and Outcome- On admission labs where drawn and pt had a WBC of 11.9 and his HgbA1c was 17.8. Pt was started on Vancomycin and Zosyn and a wound culture was taken. 2 days after admission pt underwent his first I&D (Image 2). After another 2 days the pt underwent his 2nd I&D and a wound vacuum was placed intra-operatively (Image 3).

Conclusions

Early diagnosis of the disease, aggressive and timely surgical management, and broad spectrum antibiotic therapy all has an impact on a diabetic patient's outcome with necrotizing fasciitis.

References