Necrotizing Fasciitis in a Patient with Type II Diabetes Mellitus - A Case Report

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Background: Necrotizing fasciitis (NF) is a rare necrotizing soft tissue infection (NSTI) of high mortality; clinically characterized by fulminant tissue destruction and systemic signs of toxicity. Clinical manifestations include erythema (72%), extended edema (75%), severe pain (72%), fever (60%), crepitus (50%), skin bullae, necrosis, or ecchymosis (38%). Worldwide, 1:3 of patients with NF die from this rapidly progressive infection.

Case presentation: A 44-year-old female patient with a past medical history of DM type II attended ER with pain in the right inguinal area. Vital signs on admission were heart rate 113bpm, blood pressure 124/82mmHg, and temperature 38.1℃. A physical exam revealed redness, swelling, and black eschar. There was crepitus and severe pain on palpation in the right inguinal area. The lab reported leukocytosis with WBC 14,800, and uncontrolled DM with a glucose level of 350 mg/dL and HbA1c >14: otherwise unremarkable. Abdomen/pelvis CT scan report indicated extensive pockets of air plus soft tissue fat stranding seen in the right infra pubic region extending along the right perineum and into the medial aspect of the proximal thigh featuring necrotizing fasciitis. The patient was admitted, and sepsis protocol was initiated. Surgery was consulted, and the patient was taken immediately for surgical debridement, resulting in an open wound (27x12cm). Post-op the patient was transferred to ICU for close follow-up and later transferred to the surgical ward. During the hospital stay, wound cultures were positive for the Streptococcus viridians group in addition to a few Staphylococci coagulase-negative, most likely flora contaminants. No growth on blood cultures. Post-open wound was managed by wound care consultants. Broad-spectrum IV antibiotics were continued during hospitalization, and the patient was later discharged with oral antibiotics.

Conclusion: Inadequate management of undiagnosed skin ulcers can rapidly progress in diabetic patients to Necrotizing Fasciitis due to immunosuppressed status and uncontrolled Diabetes Mellitus. Necrotizing Fasciitis has a high mortality rate and complications can range from amputation to chronic complex wounds. Adequate diagnosis and immediate medical and surgical treatment remain vital for decreased mortality and a higher rate of recovery.