

Cocaine Induced Full Thickness Skin Necrosis

Ashley N. Amalfi, MD; Erika A. Henkleman, MD; Nicole Z. Sommer, MD; Reuben A. Bueno Jr MD; Michael W. Neumeister, MD

Introduction: We report a series of cocaine-induced full-thickness skin necrosis of 10-20% total body surface area. Wound management included serial debridements and split-thickness skin grafting.

Methods: A retrospective review was performed of patients presenting with cocaine- induced skin necrosis. IRB approval was obtained to review patient demographics and medical history. Skin histology, serum immunology and clinical course were analyzed.

Results: Four patients (age 37-50) with cocaine-induced skin necrosis were identified between December 2010 and June 2011. All patients were cocaine users who suffered a prodrome of purpura which progressed to eschars and full-thickness necrosis within 4-6 weeks [Figure 1]. Wounds involved the extremities, trunk and face. One patient eviscerated through abdominal necrosis overlying a ventral hernia. All patients demonstrated auto-antibodies including ANA, P-ANCA, lupus anticoagulant and rheumatoid factor. Histopathology revealed thromboses of dermal vessels with few inflammatory cells. Management included serial debridements, xenografting, and split-thickness skin grafting [Figure 2].



[Figure 1] Eschars following cocaine binge



[Figure 2] Defect after soft-tissue debridement

Conclusions: The implicated cause of skin necrosis is not the cocaine itself, but rather the adulterant levamisole. This anti-helminth is added to increase the weight of the powder. Levamisole is currently detected in 70% of cocaine transported into the US. We were able to identify levamisole on the drug paraphernalia of a patient in our series. Recent reports link this adulterant to life-threatening agranulocytosis and purpura. In all reported cases, lesions resolved completely with drug abstinence.

Our series represents the first report of cocaine- induced skin necrosis necessitating surgical management. As reconstructive surgeons, we must have a heightened awareness to aid in early diagnosis and treatment of this new disease process.