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Levamisole-induced Vasculitis in a Cocaine User

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A 50-year-old woman presented with a 3-day history of a progressive, painful, non-blanchable, purpuric rash (retiform purpura) with areas of necrosis and bullae formation involving her face, trunk, extremities, and oral and nasal mucosa (Figure 1). She endorsed a history of cocaine use, and urine toxicology screening was positive for both cocaine and levamisole by liquid chromatography-tandem mass spectrometry. Laboratory findings included leukopenia and an elevated erythrocyte sedimentation rate (67 mm/h). Antinuclear antibody and antineutrophil cytoplasmic antibody (ANCA) testing was positive with elevated antimyeloperoxidase and antiproteinase 3. An anticardiolipin antibody assay was negative.

She was diagnosed with levamisole-induced vasculitis given the typical features of diffuse purpuric lesions (including the helical rims of the ears) and associated ANCA

positivity in the appropriate epidemiologic context^{1,2}. Intravenous dexamethasone (4 mg/day for 7 days) was initiated, which halted progression of skin lesions. She was transferred to a burn unit where she received surgical debridement of the necrotic tissue and skin grafting.

Levamisole, a common diluent used in the preparation of powder and crack cocaine, is thought to augment cocaine's pleasurable "high"³. Levamisole is an immune modulator and anthelmintic agent that was removed from several national markets because of toxicities such as vasculitis and leukopenia^{3,4}.

Optimal treatments for this condition remain to be elucidated, but drug cessation, supportive care, steroids, plasmapheresis, and surgical debridement are described^{3,4,5}. Use of cocaine adulterated with levamisole has markedly increased in the past few years and levamisole-induced vasculitis



Figure 1. Retiform purpura with surrounding erythema and areas of central necrosis and bullous formation on the legs (A) and on the helix of the right ear (B). These cutaneous findings, in particular on the helix of the ear, are characteristic of levamisole-induced vasculitis.

should be considered in anyone presenting with leukopenia, retiform purpura, and a history of cocaine use^{3,4,5}.

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