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PHOTOLETTER TO THE EDITOR

Diffuse cocaine-related purpura

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Abstract

Diffuse purpura is an uncommon skin manifestation found in platelet and coagulation disorders, meningococcemia, vasculitides and cocaine use. Reports of cocaine-related purpura predominantly involve adulteration with the anti-helminthic, levamisole. Levamisole enhances the effects of cocaine and is known to cause vasculitis. Recently, the CDC also released an advisory of oxymorphone being used intravenously causing thrombogenic thrombocytopenic purpura (TTP). We report the case of a patient with diffuse purpura ultimately diagnosed with cocaine-related thrombogenic vasculopathy. In the current environment of adulterated cocaine usage and increased prescription narcotic abuse, it is crucial to investigate substance abuse as a cause of diffuse purpura. (*J Dermatol Case Rep*. 2013; 7(4): 132-133)

Key words:

cocaine, levamisole, oxymorphone, purpura

A 38-year-old Caucasian female was brought from home to our Emergency Room (ER) after reportedly being bitten by a spider on her left hand two days earlier. She subsequently developed increasing confusion, headache, joint pains and a purple rash to her body. The patient denied any prior medical history or sick contacts. She did not admit to any prescription or illicit drugs or alcohol and smoked a pack of cigarettes daily.

Her exam showed a tearful, older-than-stated age female complaining of diffuse headache and light sensitivity. Pupils were equal and reactive and she exhibited no neck stiffness or lymphadenopathy. The patient was tachycardic with normal heart sounds and no murmurs. Her pulmonary, abdominal and musculoskeletal exams were unremarkable. Cranial nerve exam showed no deficits other than a slow, halting speech. Skin exam revealed purpura to the left hand, left ear and both arms (Fig. 1A-D).

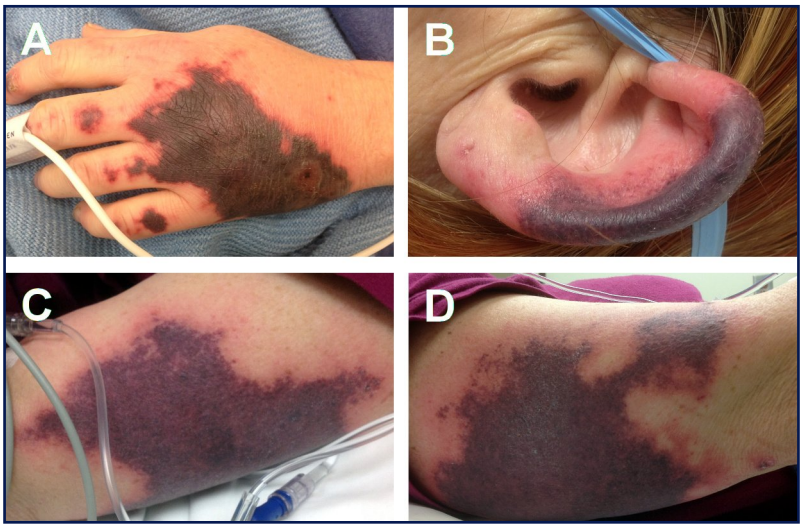

Figure 1

Cocaine-induced purpura. (A) left hand, dorsum; (B) left ear; (C) left arm biceps, lateral; (D) right forearm, lateral.

Complete blood cell count revealed a white blood cell count 5.9, hemoglobin 11.7, hematocrit 34.9 and platelets 214,000. A comprehensive metabolic panel showed a creatinine of 1.33 with normal electrolytes and liver function tests. International normalized ratio was 0.94. Chest x-ray showed a possible right lung multifocal pneumonia. Electrocardiogram was sinus tachycardia. A non-contrast head CT scan showed no acute intracranial abnormalities. Cerebrospinal fluid (CSF) was colorless with 3 white blood cells, total protein 28, glucose 56 and a negative gram stain. Urine drug screen was positive for opiates, cannabinoids, benzodiazepines and cocaine. The patient had no laboratory values suggestive of a platelet or coagulation disorder and no CSF studies suggestive of meningitis. Several antibody and autoimmune markers were sent to evaluate for vasculitides. Pertinent results included: positive Hepatitis C antibody, negative HIV test, ANA < 1:80 and p-ANCA 1:620.

Ultimately, to aid in the diagnosis, punch biopsies were done. Low power magnification (Fig. 2A) showed epidermal pallor with necrosis and numerous well-formed and partially formed thrombi in the small to medium sized arteries, capillaries, and veins of the dermis. High power magnification (Fig. 2B) revealed organizing thrombi with evidence of recanalization and endothelial proliferation. The final pathologic diagnosis was cocaine/levamisole-related thrombogenic vasculopathy.[1,2] Our patient manifested several common findings found in prior reported levamisole exposure cases: ear and lower extremity purpura, arthralgias, and elevated p-ANCA.[3] These findings, plus a positive urine drug screen for cocaine and her punch biopsy results, led us to diagnose diffuse cocaine-related purpura.

Shortly after this case presented to our ER, the Centers for Disease Control (CDC) issued a health advisory outlining a cohort of patients that presented with TTP from injection of reformulated oxymorphone (Opana ER) tablets. The first reports of this came in April 2012, two months after the medication had be newly formulated to inhibit crushing and dissolving of the tablets.[4] By mid-January 2013, the CDC report outlined 15 non-fatal cases of TTP local to East Tennessee. 13 of the cases involved Caucasian females ages 22-49. 14 were from injecting Opana ER. 7 of the 15 patients were treated for sepsis plus TTP. 12 of the 15 patients reported chronic Hepatitis C or had positive anti-HCV antibody.[5]

Evaluation of a patient presenting with diffuse purpura requires a detailed history, physical examination and extensive workup. Given the high prevalence of adulterated cocaine and rise in prescription narcotic abuse, investigation of substance abuse as a cause of diffuse purpura is key in both the clinic and ER settings.[6]

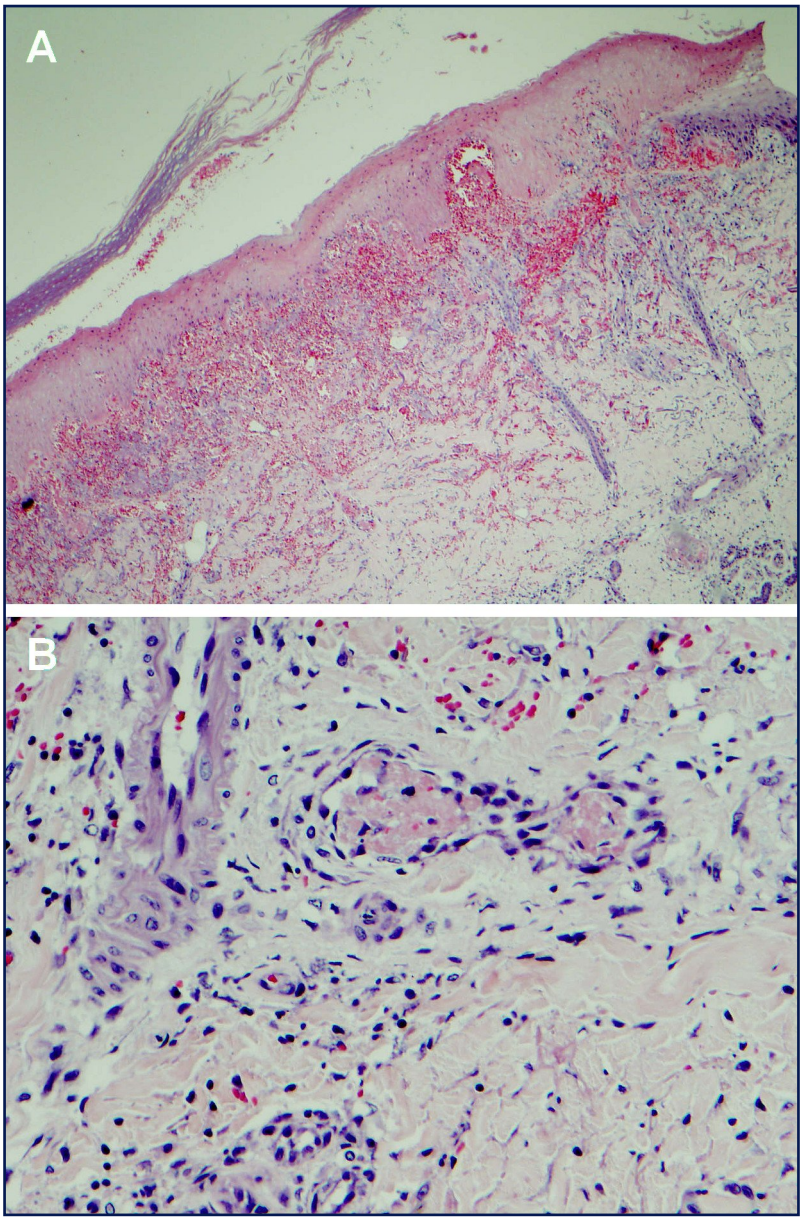

Figure 2

Histopathology of cocaine-induced thrombogenic vasculopathy. (A) Hematoxylin and Eosin (H&E), Low Power Resolution; (B) H&E, High Power Resolution.

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