

IMAGES IN EMERGENCY MEDICINE

Dermatology

Young woman with black spots and a red rash on her forearmLeyla Sadat Farshidpour BS¹ | Nolan John Caldwell MD^{2,3} | David Russell Vinson MD^{2,3,4}¹University of California Davis School of Medicine, Sacramento, California, USA²The Permanente Medical Group, Oakland, California, USA³Department of Emergency Medicine, Kaiser Permanente Roseville Medical Center, Roseville, California, USA⁴Kaiser Permanente Division of Research and the CREST Network, Oakland, California, USA**Correspondence**David R. Vinson, MD, Department of Emergency Medicine, Kaiser Permanente Roseville Medical Center, 1600 Eureka Road, Roseville, California 95661, USA.
Email: drvinson@ucdavis.edu**1 | PATIENT PRESENTATION**

A 37-year-old female presented to the emergency department for a diffuse, itchy, red rash with several prominent black spots 4 days after foraging in the forest. On examination, she had a diffuse erythematous maculopapular rash over the right forearm, chest, and face with several well-demarcated black plaques on her forearm (Figure 1).

2 | DIAGNOSIS**2.1 | Black spot poison oak contact dermatitis**

The emergency physician consulted dermatology, who recommended a prednisone taper and clobetasol ointment. The spots resolved after several weeks.

Plants in the *Toxicodendron* genus (eg, poison oak and poison ivy) extrude oleoresin (sap) when injured.^{1,2} On exposure to air, oleoresin oxidizes and hardens into a black lacquer, sealing the injury within minutes. High urushiol concentrations are required to develop black spots (or streaks) on the skin. This is uncommon because most exposures are brief and involve low concentrations. Black spots are adherent and cannot be removed.³ Fortunately, they slough off naturally after several weeks without scarring. Black discoloration of clothing may persist.⁴ Spots contain the allergen, urushiol, and touching them should be avoided to reduce continued exposure.

Black spots precede the allergic dermatitis,^{4,5} which occurs in 2–96 hours in sensitized individuals and 10–14 days for first-time



FIGURE 1 Diffuse erythematous maculopapular rash across right forearm, wrist, and hand with 3 well-demarcated black plaques, each with circumferential erythema

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exposures. Diagnosis of a black spot without the characteristic dermatitis is more challenging.^{4,6}

Prompt recognition is important to avoid unnecessary testing for malignancy, alleviate patient fears, and expedite treatment, which is directed at the allergic component with topical or oral steroids, depending on the location and severity of the hypersensitivity reaction.^{1,7}

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