

Dermoscopic Findings of Irritant “Poral” Reactions to Cobalt During Patch Testing

To the Editor:

Cobalt is a common contact allergen found in alloys, plastics, leathers, cements, and other products.¹ Application of cobalt during patch testing can result in nonspecific inflammation, described as an irritant “poral” reaction. In 1 study of 222 patients, 32% were found to have poral irritation reactions, with pathology consistent with possible acrosyringial disruption of the eccrine sweat ducts.² In contrast to a true contact allergy, irritant poral reactions are described to have a petechial/purpuric appearance, although there are few photographs in the literature.^{2,3}

To better diagnose and characterize poral reactions, we examined various patch testing results with dermoscopy (Fig. 1). Because of blanching from the contact dermatoscope, patches of allergic contact dermatitis appeared only faintly erythematous and nonspecific. In contrast, the irritant poral reaction to cobalt showed an even distribution of small, white circles with surrounding brown pigment halos (Fig. 1A). In certain cases, patients exhibited both irritant poral reactions and allergic contact dermatitis to cobalt. In these cases, dermoscopy revealed the pink-erythematous background of contact dermatitis, combined with white circles surrounded by brown pigment of an irritant poral reaction (Fig. 1B).

Dermoscopy highlights the differences between irritant poral reactions and allergic contact dermatitis. Irritant poral reactions show evenly distributed punctate brown pigment deposition with white centers. Interestingly, the dermoscopic morphology is similar between patients, in size of the white centers and color of the surrounding brown pigment. The size of the brown pigment, however, varied greatly within and between patients. The morphology of the poral response suggests acrosyringial involvement with surrounding deposition/inflammation, consistent with previous histologic studies.² Use of dermoscopy may aid in differentiating true allergic contact dermatitis from nonspecific irritant poral reactions in cobalt patch testing.

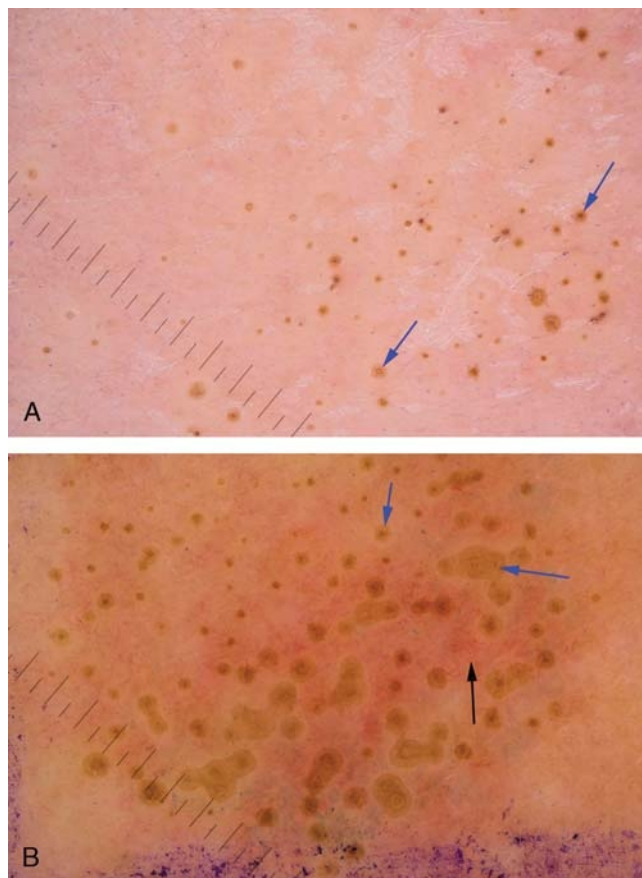


Figure 1. A, Dermoscopy of cobalt site (irritant poral reaction), with poral reaction centered around acrosyringia (blue arrow). B, Dermoscopy of cobalt site (allergic contact dermatitis with underlying irritant poral reaction) with erythema (black arrow) and poral reaction centered around acrosyringia (blue arrow).

Yul W. Yang, MD, PhD
Collin M. Costello, BS
Aaron R. Mangold, MD
Mayo Clinic
Scottsdale, AZ
mangold.aaron@mayo.edu

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