

# Acrodermatitis Enteropathica Associated With Inflammatory Bowel Disease

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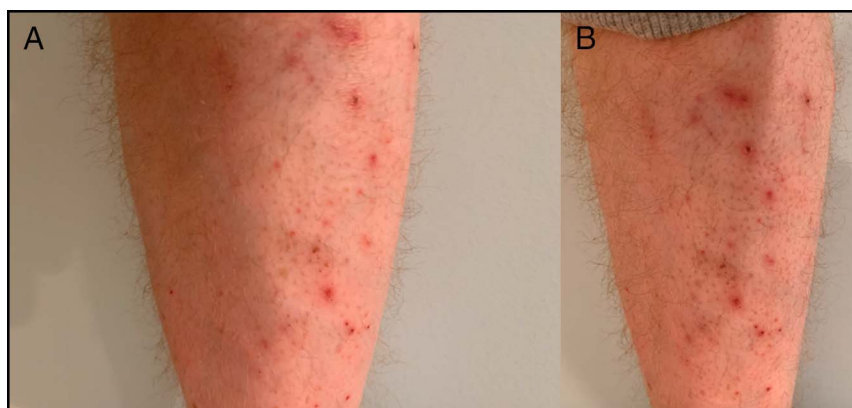
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## CASE REPORT

A 27-year-old male with a history of ileocolonic Crohn's disease (CD) status-post recent flare-up manifesting as abdominal pain and watery bowel movements presented with new-onset pruritic lesions. Physical examination revealed a scaly, dry, inflamed, and eczematous-appearing rash, located bilaterally on the shins (Figure 1). Of note, the patient has also recently noticed diarrhea (since the resolution of his flare-up) and new-onset baldness. Laboratory data showed low serum levels of zinc ( $19 \mu\text{mol/dL}$ ) as well as low normal serum alkaline phosphatases (53 U/L). He was started on oral zinc sulfate therapy 3 mg/kg/d for 14 days, with a clinical suspicion of acrodermatitis enteropathica, a rare extraintestinal manifestation of CD. He demonstrated symptomatic improvement within 2 weeks of treatment and was continued on 1 mg/kg/d thereafter.

Extraintestinal manifestations occur in up to as many as 40% of patients with inflammatory bowel disease, and the prevalence is higher in CD compared to ulcerative colitis.<sup>1</sup> Uveitis, pyoderma gangrenosum, erythema nodosum, and aphthous stomatitis are among the more common manifestations reported. Acrodermatitis enteropathica is generally caused by an autosomal recessive mutation of the SLC39A4 gene located on chromosome 8q24.3, which is the gene responsible for zinc transportation.<sup>2</sup> Being hereditary in nature, almost all cases occur in the pediatric population, causing malabsorption of the essential mineral zinc.<sup>3</sup> Although rare, acrodermatitis enteropathica may also be seen in adults, because of conditions that cause intestinal malabsorption of zinc, such as our case.<sup>4</sup>

Clinically acrodermatitis enteropathica is characterized by the presence of red and inflamed areas of dry skin that evolve into pus-containing lesions. A diffuse loss of hair on the scalp, oral ulcers, and diarrhea are other common manifestations.<sup>5</sup> The diagnosis can



**Figure 1.** (A) Eczematous, allergic-appearing rash manifesting clinically on the shin. (B) Dry, scaly, and inflamed lesions presenting on the shin.

be suggested if low serum levels of zinc or alkaline phosphatase—a zinc-dependent enzyme—are detected, in combination with the clinical symptoms. The diagnosis can then be confirmed by a rapid clinical response to zinc supplementation or via skin biopsy. Although rare, AE should now be considered in patients with inflammatory bowel disease with supporting laboratory data and skin lesions of an unknown etiology.

## DISCLOSURES

Author contributions: S. Weissman, M. Aziz, and S. Saleem wrote the manuscript and reviewed the literature. A. Hassan and M. Sciarra edited the manuscript. S. Weissman is the article guarantor.

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Informed consent was obtained for this case report.

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