

Letter to the Editor

Photosensitivity Dermatitis From Inadvertent Exposure to Aminolevulinic Acid

Dear *Cutis*[®]:

While driving to work on a sunny morning, a 30-year-old dermatology resident experienced intense burning on his forehead that abated abruptly upon arrival at clinic. A sickle-shaped erythematous patch was noted (Figure). A diagnosis of phytophotodermatitis was proposed; however, the resident did not recall recent contact with plants. The diagnosis of photosensitivity



Phototoxicity reaction 24 hours after inadvertent topical exposure to 5-aminolevulinic acid. The activating visible light exposure likely occurred through a car windshield while the patient was driving (approximately 6 hours later) but was not noted at that time.

dermatitis was confirmed when the resident remembered being inadvertently squirted with 5-aminolevulinic acid (ALA) while in clinic 24 hours prior and neglecting to wash it off. The lesion resolved spontaneously within a week.

Exogenous factors, an “outside job,” must be strongly considered when encountering strikingly geometric or bizarre-shaped skin lesions. ALA is a prodrug metabolized to protoporphyrin IX over several hours within the epidermis after topical application and is used in photodynamic therapy. Visible (blue) light activates protoporphyrin IX, immediately generating reactive oxygen species that destroy premalignant or malignant cells. This porphyrin also photosensitizes normal skin, as in this case, and causes the disorder protoporphyria when endogenous production is excessive.

Sincerely,
Ross Zeltser, MD
Barbara A. Gilchrest, MD
Boston, Massachusetts

Dr. Zeltser reports no conflict of interest. Dr. Gilchrest is an advisory board member for DUSA Pharmaceuticals, Inc.