A 36-year-old homeless man presented with a 3-week history of bilateral, symmetrical, scaly, and painful dermatitis in both hands up to the rim of the sleeves (Figure) and watery bloody diarrhea. Anxiety, headaches, and tremors were also present. He had been consuming 6 to 8 liters of wine every day for the past 11 years. He used to wear a hooded sweatshirt, not having other photo-exposed areas. The skin biopsy demonstrated hyperkeratosis with focal parakeratosis and dilatation of the superficial dermis capillary (Supplemental Figure, available online at http://www.mayoclinicproceedings.org). Despite treatment with high-dose benzodiazepines, he experienced symptoms of alcohol withdrawal syndrome, including delirium tremens. Treatment with supportive care and 800 mg of niacin (vitamin B₃) was established at his admission, with complete recovery of the delirium, skin lesions, and diarrhea. He joined an alcohol detoxification program.

Pellagra is a nutritional disorder caused by a deficiency of niacin and/or its precursor tryptophan. Although it is considered an almost eradicated disease in developed countries, pellagra can occur in patients who experience alcoholism, anorexia nervosa, and malabsorptive or metabolic disorders, including Hartnup disease, and in patients treated with isoniazid. The classic syndrome is characterized by the 3 Ds triad of dermatitis, diarrhea, and dementia that if untreated can lead to death (the fourth D). The characteristic erythematous rash occurs in sun-exposed areas such as the neck (Casal collar) and hands (pellagra gloves) due to a photosensitivity reaction. The neurocognitive impairment could be more consistent with delirium than with dementia. Pellagra is usually clinically diagnosed. Treatment consists of correction of underlying factors and supplementation with niacin.
