

A Photosensitive Pellagra-Like Nutritional Dermatitis: A Forgotten Entity in Resource-Rich Countries

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Objective 1: To highlight clinical and histologic features suggestive of nutritional deficiency dermatosis.

Objective 2: To underscore the importance of considering nutritional deficiencies in certain at risk populations in developed countries.

Objective 3: To emphasize the role of the dermatologist in identifying uncommon nutritional deficiencies.

A 40-year-old female with history of bulimia nervosa and alcohol abuse was admitted for a four-week history of a painful, blistering rash after brief exposure to the sun. Physical exam revealed well-demarcated, symmetric, red-brown, glazed plaques, some with overlying superficial erosions and flaccid bullae involving the upper back, shoulders, arms, dorsal hands and dorsal feet. The patient reported concurrent onset of diarrhea, glossitis and mouth soreness. Histologic sections revealed parakeratosis, superficial epidermal pallor and necrosis with scattered dyskeratosis and sparse underlying perivascular inflammation. Laboratory work up revealed decreased serum folate, vitamin C, vitamin D, protein, and albumin with normal serum niacin (vitamin B3). A diagnosis of photosensitive pellagra-like nutritional dermatosis was made.

Although nutritional deficiencies are rare in resource-rich countries, patients with alcoholism, eating disorders, intestinal malabsorption, history of bariatric surgery, and drug therapy such as isoniazid remain susceptible. Pellagra rarely presents with the classic triad of dermatitis, diarrhea and dementia, but the photodistributed dermatosis is characteristic. Blood levels of niacin are not reliable measurements of functional niacin status; quantification of the urinary excretion of metabolites is most sensitive although impractical and cumbersome. Concurrent micronutrient deficiencies can also impair the utilization of niacin leading to functional impairment, despite normal levels. Diagnosis is confirmed by prompt response to niacin supplementation. Clinicians should maintain a high index of suspicion in patients at risk for nutritional deficiency even with normal blood niacin levels, given the significant patient morbidity and mortality associated with the diagnosis.

References:

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