Eczema Craquelé With Purpura: A Sign of Internal Malignancy or Malabsorption Syndrome?

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We describe a patient with eczema craquelé associated with adenocarcinoma of the pancreas. Following a Whipple operation, zinc malabsorption was ruled out as the cause based on the distribution of the dermatitis, alkaline phosphatase levels within reference range, and response to pancreatic enzyme replacement therapy. Because the patient's skin changes appeared following removal of the malignancy and resolved shortly after the second course of pancreatic enzyme replacement therapy, fat malabsorption probably was responsible for the skin changes rather than a direct paraneoplastic expression of the cancer. The occurrence of purpura with eczema craquelé has not been previously described in the literature. These findings raise the possibility that generalized eczema craquelé is a diagnostic clue to a malignancy and argue for adding it to the list of cutaneous paraneoplastic syndromes.

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Eczema craquelé is generally considered a sign of malnutrition or the sequela of skin dryness. We describe a patient with eczema craquelé associated with adenocarcinoma of the pancreas, raising the possibility that generalized eczema craquelé is a diagnostic clue to a malignancy.

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Case Report

A 48-year-old man was hospitalized with diarrhea, weight loss, and edema mainly of the legs. A whole-body purpuric rash and eczema craquelé appeared 2 weeks prior to hospitalization (Figures 1 and 2). The patient's history revealed idiopathic thrombocytopenic purpura (diagnosed in 1999) and tuberculosis of the lung (diagnosed in 2002). Successful treatment of tuberculosis with multiple antibiotics for 6 months caused persistent diarrhea. A computed tomographic scan of the abdomen and results of a pancreatic biopsy revealed adenocarcinoma of the pancreas. A Whipple operation was performed, but the diarrhea continued and the patient lost 10 kg in 5 months. Treatment with pancrelipase delayed-release capsules containing lipase, amylase, and protease brought no improvement.

Laboratory tests upon hospitalization revealed the following levels: hemoglobin, 9.4 g/dL (reference range, 14.0–17.5 g/dL); platelet count (thrombocytes), 64,000/µL (reference range, 150,000–350,000/µL); serum albumin, 1.8 g/dL (reference range, 3.5–5.0 g/dL); international normalized ratio, 3.6 (reference range, 0.8–1.2); and alkaline phosphatase within reference range (89 U/L; reference range, 30–120 U/L). The patient's medications included levothyroxine sodium for hypothyroidism, spironolactone, and enoxaparin sodium. A primary intestinal cause for his malabsorption was ruled out. A second course of treatment with a preparation containing lipase, amylase, and protease was successful; the rash disappeared and the patient gained weight.

Comment

Localized eczema craquelé usually appears in elderly patients, mostly as xerotic eczema and cracking of the skin on the shins. Generalized forms resistant to dermatologic treatment occur in patients with endocrine disorders, nutritional deficiencies, and malignancies.

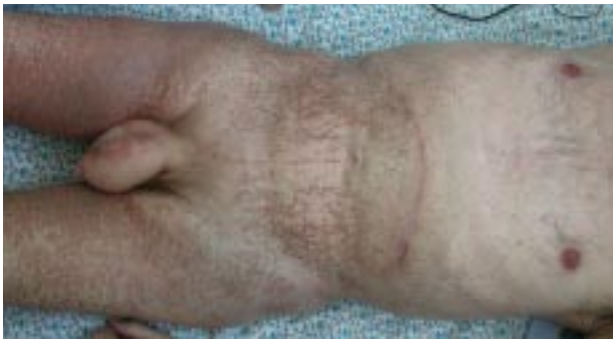

Figure 1. A 48-year-old man with widespread eczema craquelé with purpura following a Whipple operation for adenocarcinoma of the pancreas.

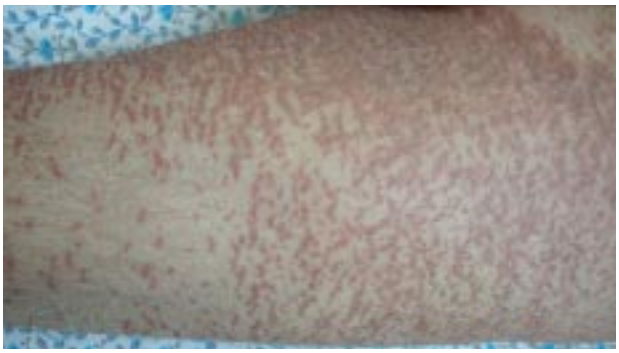

Figure 2. Eczema craquelé with purpura on the thigh.

Zinc deficiency sometimes associated with more complex malnutrition, such as loss of essential fatty acids, has been implicated in the etiology.[1,2] Eczema craquelé also can occur during the course of some cancers, mainly malignant lymphoma, gastric adenocarcinoma, and glucagonoma.[1,3-7]

Malabsorption is a frequent mechanism of weight loss in patients with pancreatic or biliary carcinomas in whom decreased pancreatic enzymes and bicarbonate output are common.[8] Fat malabsorption generally is more severe than protein malabsorption because not only pancreatic but biliary secretion also may be compromised. Thus, patients with moderate or severe fat or protein malabsorption may improve with pancreatic enzyme replacement therapy.[9,10]

Our patient shows that eczema craquelé may not necessarily be caused by malnutrition or skin dryness but may result from an underlying malignancy. The clinical features and laboratory findings in our patient may point to an underlying malignancy not yet diagnosed. While nutritional impairments are known features of malignancy, the eczema craquelé seen in our patient could have stemmed from malabsorption following the Whipple operation. Indeed, the combination of xerotic dermatitis, diarrhea, weight loss, and low serum albumin levels point to a zinc deficiency; however, the distribution of the dermatitis, alkaline phosphatase levels within reference range, and response to pancreatic enzyme replacement therapy argue against this cause. A direct paraneoplastic expression of the cancer certainly must be considered. Because the patient's skin changes appeared following removal of the malignancy and resolved shortly after the second course of pancreatic enzyme replacement therapy, fat malabsorption probably was responsible for the skin changes. The simultaneous occurrence with eczema craquelé is unusual and has not been described until now. The purpura probably appeared in the cracks of the eczema due to exaggerated idiopathic thrombocytopenic purpura–induced bleeding in contrast to minimal, dotlike bleeding of the upper dermal vessels, which leads to the craquelé pattern in eczema craquelé. Our findings lead us to recommend that generalized eczema craquelé be included in the long list of cutaneous paraneoplastic syndromes.

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