

Necrolytic Migratory Erythema With Recalcitrant Dermatitis as the Only Presenting Symptom

Rachel Garner, MD; Kristen Ahern, MD; Brian Poligone, MD, PhD

PRACTICE POINTS

- Recalcitrant dermatitis may be a symptom of internal malignancy.
- Glucagon levels are helpful in identifying glucagonomas of the pancreas.
- Although surgical excision is the preferred treatment of glucagonomas, azathioprine also can control dermatitis associated with necrolytic migratory erythema.

To the Editor:

A 52-year-old man presented with recalcitrant dermatitis of 6 years' duration. He was otherwise in excellent health. On initial presentation, physical examination revealed symmetrical, erythematous, blanching plaques with areas of erosions and overlying hemorrhagic crust on the eyebrows, scalp, back, dorsal aspects of the hands, axillae, abdomen (Figure), buttocks, groin, scrotum, pubis, and lower legs. Some areas showed slight necrosis. He denied any fevers, chills, night sweats, cough, chest pain, shortness of breath, dizziness, lightheadedness, weight loss, or appetite change.

Throughout the disease course the patient had visited numerous dermatologists seeking treatment. He had response to higher doses of oral prednisone (80 mg taper), but the condition would recur at the end of an extended taper. Treatment with narrow-band UVB, mycophenolate mofetil, methotrexate, acitretin, topical clobetasol, and topical pimecrolimus provided no relief. Eventually he was placed on



Scaly plaques on the lower abdomen and inguinal crease characteristic of necrolytic migratory erythema.

azathioprine 100 mg twice daily, which led to near-complete resolution. Outbreaks continued every few months and required courses of prednisone.

Multiple biopsies over the years revealed subacute spongiotic or psoriasiform dermatitis. At multiple visits it was noted that during flares there were areas of crusting and mild necrosis, which led to an extensive biochemical investigation. The glucagon level was markedly elevated at 630 ng/L (reference range, 40–130 ng/L), as was insulin at 71 μ IU/mL (reference range, 6–27 μ IU/mL). Complete blood cell counts over the disease course showed mild

From the Rochester Skin Lymphoma Medical Group, New York.

The authors report no conflict of interest.

Correspondence: Brian Poligone, MD, PhD, 6800 Pittsford Palmyra Rd, Fairport, NY 14450 (bpoligone@roclymphoma.com).

normochromic normocytic anemia. The abnormal laboratory findings led to computed tomography of the abdomen, which revealed a mass in the body of the pancreas measuring 3×3.8 cm. After computed tomography, the patient underwent a laparoscopic distal pancreatectomy and splenectomy. Histologic examination revealed a well-differentiated pancreatic endocrine tumor (glucagonoma) confined to the pancreas. After the surgery, the patient's rash resolved within a few days and he discontinued all medications.

Diagnosis of glucagonomas often is delayed due to their rarity and lack of classical signs and symptoms. The distribution of the lesions seen in necrolytic migratory erythema (NME) usually involves the inguinal crease, perineum, lower extremities, buttocks, and other intertriginous areas.¹ Our patient had involvement in the typical distribution but also had involvement of the scalp, face, and upper body. The typical histology for NME is crusted psoriasiform dermatitis with a tendency for the upper epidermis to have necrosis and a vacuolated pale epidermis.² Our patient's histologic findings were less specific showing epidermal spongiosis with a scant lymphocytic infiltrate and at times acanthosis. The lack of classical skin findings and histology delayed diagnosis. In more than 50% of patients,

metastasis has already occurred by the time the patient is diagnosed.³ Treatment is aimed at complete removal of the pancreatic tumor, which typically leads to a rapid improvement in symptoms. For patients unable to undergo surgery, chemotherapy agents and octreotide are used; unfortunately, symptoms may persist.⁴ The response to azathioprine in our patient suggests it is a possible alternate therapy for those with persistent NME.

This patient highlights the difficulty of diagnosing a glucagonoma when the only clinical manifestation may be NME. Moreover, skin biopsies that can sometimes be diagnostic may be nonspecific. This patient also shows a potential benefit of azathioprine in the treatment of NME.

REFERENCES

1. Shi W, Liao W, Mei X, et al. Necrolytic migratory erythema associated with glucagonoma syndrome [published online June 7, 2010]. *J Clin Oncol*. 2010;28:e329-e331.
2. Rapini RP. *Practical Dermatopathology*. London, England: Elsevier Mosby; 2005.
3. Oberg K, Eriksson B. Endocrine tumors of the pancreas. *Best Pract Res Clin Gastroenterol*. 2005;19:753-781.
4. Wermers RA, Fatourehchi V, Wynne AG, et al. The glucagonoma syndrome: clinical and pathologic features in 21 patients. *Medicine (Baltimore)*. 1996;72:53-63.