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Atypical chronic leg ulcers revealing pancreatic panniculitis associated with pancreatic adenocarcinoma

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Dear Editor,

Pancreatic panniculitis (PP) is a rare form of lobular panniculitis associated with pancreatic disorders, including acute and chronic pancreatitis and pancreatic neoplasms. It develops in a small percentage of patients with pancreatic disease and may represent the first manifestation of an occult malignancy. Clinically, PP usually presents with painful erythematous-to-violaceous nodules on the lower extremities, which may ulcerate and discharge oily brown material secondary to liquefactive fat necrosis induced by circulating pancreatic enzymes.[1-3] Because of its rarity and heterogeneous presentation, diagnosis is frequently delayed or initially misdirected toward more common inflammatory or vascular conditions.

We report the case of an 80-year-old woman referred to our dermatology unit for a painful pretibial ulcer of approximately 3 weeks' duration. Clinical examination showed a 7-mm ulcer with sharp borders and a fibrinous base on the left pretibial area, associated with hyperpigmented perilesional skin and steroid-induced atrophy (Figure 1). An erythematous nodule was also observed on the lateral aspect of the knee. The patient had a history of primary Sjögren syndrome treated with long-term corticosteroids and previous breast cancer treated surgically and with adjuvant chemotherapy and radiotherapy.

Initial diagnostic work-up, including vascular Doppler ultrasonography and laboratory investigations, excluded venous or arterial insufficiency and major coagulation abnormalities. Because of the intense pain and the patient's autoimmune background, an inflammatory ulcer associated with Sjögren syndrome was initially suspected, and systemic corticosteroid therapy was increased.

At follow-up, the initial ulcer partially improved; however, new painful ulcerated nodules progressively developed on both lower limbs. The multifocal appearance of the lesions and their unusual clinical evolution prompted histopathologic evaluation. Skin biopsy revealed lobular panniculitis with extensive steatonecrosis, ghost adipocytes, neutrophilic infiltrate, and fine granular calcifications (Figure 1 a,b), findings highly suggestive of PP.[1,4,5]

Ten days after biopsy, the patient was hospitalized for acute abdominal pain and diagnosed with acute biliary pancreatitis requiring sphincterotomy. Subsequent imaging investigations revealed pancreatic adenocarcinoma involving the pancreatic head. Because of the patient's comorbidities and unresectable stage, radiotherapy was performed, resulting in partial tumor reduction. At dermatologic follow-up, the cutaneous ulcers had completely healed, paralleling improvement of the underlying pancreatic disease.

PP remains diagnostically challenging because of its rarity and variable clinical manifestations. In approximately 40% of cases, cutaneous findings precede pancreatic symptoms, representing an

important clue for early diagnosis of pancreatic disease.[2,6] Although the classic presentation consists of tender subcutaneous nodules, ulcerative lesions may predominate and mimic more common causes of chronic leg ulcers, leading clinicians away from the correct diagnosis.

Chronic leg ulcers are most commonly associated with venous insufficiency, ischemia, diabetes, or pressure injury; however, atypical ulcers account for a significant minority of cases and include inflammatory, neoplastic, vasculopathic, hematologic, and drug-related etiologies.[7,8] In our patient, multiple comorbidities, long-term corticosteroid therapy, and Sjögren syndrome initially obscured the diagnosis.[9] The subsequent development of nodular lesions, together with histopathologic findings, proved crucial in directing further systemic investigations.

Histologically, PP is characterized by predominantly lobular panniculitis without vasculitis, with adipocyte necrosis and anucleated “ghost cells” surrounded by basophilic calcium deposits resulting from enzymatic fat saponification.[1,4] These findings are considered highly characteristic and help differentiate PP from other forms of panniculitis, including erythema nodosum and autoimmune-associated inflammatory panniculitis.

The prognosis of PP largely depends on the underlying pancreatic disease. Resolution of cutaneous lesions generally parallels successful treatment of the pancreatic disorder, whereas cases associated with pancreatic malignancy often carry a poor prognosis because diagnosis is made at an advanced stage.[3,6] In our case, treatment of pancreatic adenocarcinoma resulted in complete healing of the skin lesions, further supporting the close relationship between cutaneous activity and pancreatic disease burden.

This case highlights the importance of considering PP in the differential diagnosis of atypical painful leg ulcers and ulcerated nodules, particularly in patients with systemic symptoms or multiple comorbidities. Early dermatologic evaluation and skin biopsy may provide essential clues leading to the diagnosis of occult pancreatic disease and may significantly influence patient management and outcome. Greater awareness of this rare entity among dermatologists, internists, and pathologists may contribute to earlier recognition and more timely multidisciplinary management.

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Figure 1. First clinical presentation: leg ulcer in the left pretibial area and ulcerated nodules on the extensor surface of the lower limb, complemented by histological findings.