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PHOTO QUIZ

Bullous dermatosis

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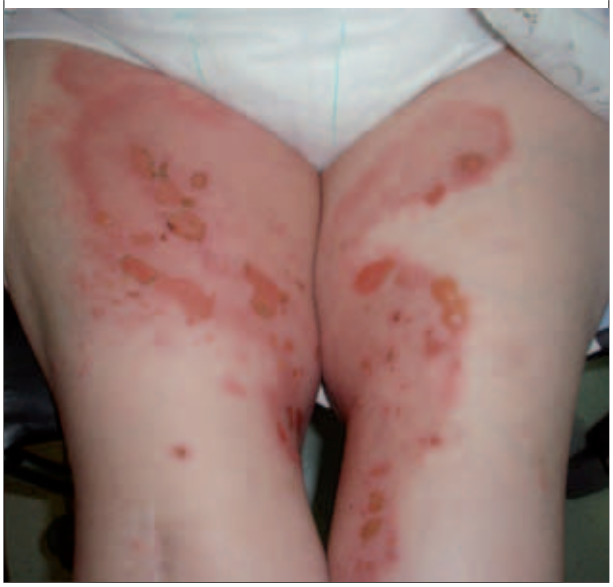
CASE REPORT

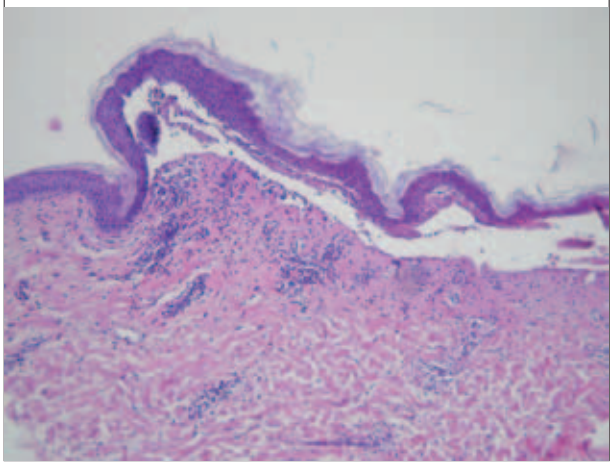
An 83-year-old woman presented with a six-month history of intensely itching cutaneous bullous lesions affecting the trunk and limbs. Her medical history included type 2 insulin-dependent diabetes mellitus and autoimmune hypothyroidism in treatment with levothyroxine. Initially, she had been misdiagnosed as bullosis diabeticorum and treated with topical antiseptics with no improvement.
Physical examination revealed multiple erosions and tense bullae on an erythematous base, filled with clear fluid, located predominantly on trunk and extremities (*figure 1*).

Figure 1. *Clinical image showing tense blisters situated on inflamed skin along the thighs (severe pruritus was reported by the patient)*



No blister spreading was detected after the application of tangential pressure to the skin (negative Nikolsky's sign). Mucous were not involved.
Laboratory evaluation revealed a high absolute eosinophil count (1456 x 10^9/l) and a slightly elevated sedimentation rate without other abnormalities. Skin biopsy showed a subepidermal blister with a dermal leucocyte infiltrate rich in eosinophils (*figure 2*).

Figure 2. *Histological image of a skin biopsy from the edge of a blister reveals a subepidermal blister with a dermal leucocyte infiltrate rich in eosinophils*



WHAT IS YOUR DIAGNOSIS?

See page 201 for the answer to this photo quiz.

ANSWER TO PHOTO QUIZ (ON PAGE 200)

BULLOUS DERMATOSIS

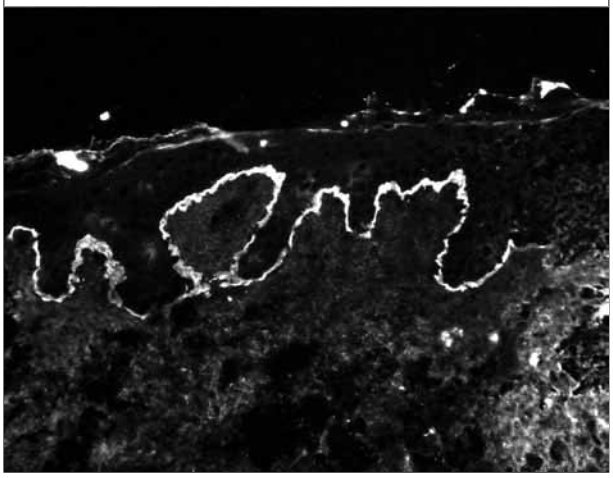
DIAGNOSIS

On direct immunofluorescence, linear reactivity for C3c and IgG was found at the dermal-epidermal junction (*figure 3*), confirming the diagnosis of bullous pemphigoid. Oral prednisone (0.5 mg/kg/day), oral dexchlorpheniramine and topical steroids were administered, achieving complete resolution of the lesions without scarring within two months. During the next 12 months, the patient only presented intermittent outbreaks of localised lesions that were successfully treated with the application of topical corticosteroids in short cycles of one to two weeks.

Bullous pemphigoid (BP) is a chronic, autoimmune blistering disease that primarily affects the skin. BP is characterised by the presence of immunoglobulin G (IgG) autoantibodies specific for the hemidesmosomal BP antigens BP230 (BPAg1) and BP180 (BPAg2). IgG autoantibody and C3 deposition seem to be T cell mediated, HLA restricted and possibly related to dysregulation of auto-reactive regulatory T cells.[1]

It occurs mainly in the elderly and rarely in children. Onset is typically between 60 and 80 years of age.[2] Patients with BP present with tense blisters with cutaneous involvement. Oral mucosal lesions are present in approximately one third of patients. The onset of BP may be either subacute or acute, with widespread, tense blisters. Significant pruritus is frequently present. In some patients, the blisters arise after persistent urticarial lesions. These blisters are usually distributed in the upper and lower extremities, groin, axilla, and abdomen.[3]

Figure 3. *Direct immunofluorescence microscopy of perilesional skin from a patient with bullous pemphigoid demonstrates in situ continuous linear deposits of C3c and IgG along the dermoepidermal junction*



The diagnosis of BP is confirmed with histological and immunopathologic studies. The histology of a BP lesion is characterised by a subepidermal vesicle or bullae, with an inflammatory infiltrate consisting predominantly of eosinophils and polymorphonuclear cells. Direct immunofluorescence studies of perilesional skin demonstrate the presence of immunoglobulins, most frequently IgG and C3, along the epidermal basement membrane zone.

The differential diagnoses for BP are cicatricial pemphigoid, pemphigus vulgaris, drug-induced bullous disorders, epidermolysis bullosa acquisita, herpes gestationis, dermatitis herpetiformis, linear IgA dermatosis and other bullous eruptions such as bullous erythema multiforme, bullous lupus erythematosus or porphyria cutanea tarda. Autoantibody formation in BP may also have a paraneoplastic aetiology, especially in lymphoproliferative neoplasms.

The treatment of BP is determined by the extent of involvement and rate of disease progression. As in other autoimmune bullous diseases, the goal of therapy is to decrease blister formation, to promote healing of blisters and erosions, and to determine the minimal dose of medication necessary to control the disease process. Localised lesions can be controlled with topical corticosteroids. In patients with progressive disease with involvement of multiple sites, systemic corticosteroids are often necessary.[2] Prednisone provides good control of the disease and the accompanying symptoms, including pruritus. In some patients, antihistamines can be used to control the pruritus. Recently, Rituximab has been described to be successfully applied in corticosteroid-refractory BP patients.

REFERENCES

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3. Yancey KB, Egan CA. Pemphigoid: clinical, histologic, immunopathologic, and therapeutic considerations. JAMA. 2000;284:350-6.