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CORRESPONDENCE

Nonbullous pemphigoid representing clinical manifestation as eczematous skin eruption

Bullous pemphigoid (BP) is a representative autoimmune subepidermal blister disease, and approximately 20% of cases recognized the absence of a typical blister.[1] Those cases result in delayed diagnosis and appropriate therapeutic selection results, leading to an increased mortality rate. Herein, we present a case of initial misdiagnosed as persistent eczematous eruption, which was finally confirmed as nonbullous pemphigoid by repeated histological examinations.

A 53-year-old female experienced persistent scaly erythematous eruptions without blisters on her entire body a few years ago. Her erythematous lesions persisted against oral steroid and cyclosporine treatment. She was referred to our department for the evaluation of eruption. She had no medication. On physical examination, scaly edematous erythema with excoriated dome-shaped prurigo nodules were seen on the trunk and limbs without mucosal lesions (Figure 1A,B). The initial examination of the skin biopsy showed that lymphocytes and a few eosinophils infiltrated the upper dermis (Figure 1C,D). Although anti-BP180 antibody titer was slightly elevated (19.8 U/mL, normal <9 U/mL), direct immunofluorescence (DIF) examination showed negative results (Figure 1E,F). Therefore, we initially diagnosed her skin eruption as eczema and prurigo. She was treated with topical corticosteroid and oral prednisolone 15 mg per day (0.15 mg/kg), which were ineffective for her skin eruption (Figure 1G,H). Furthermore, anti-BP180 antibody was gradually increased (67.8 U/mL). To exclude the possibility of nonbullous pemphigoid, we again conducted further histological examinations to evaluate the current condition. The second skin biopsy showed

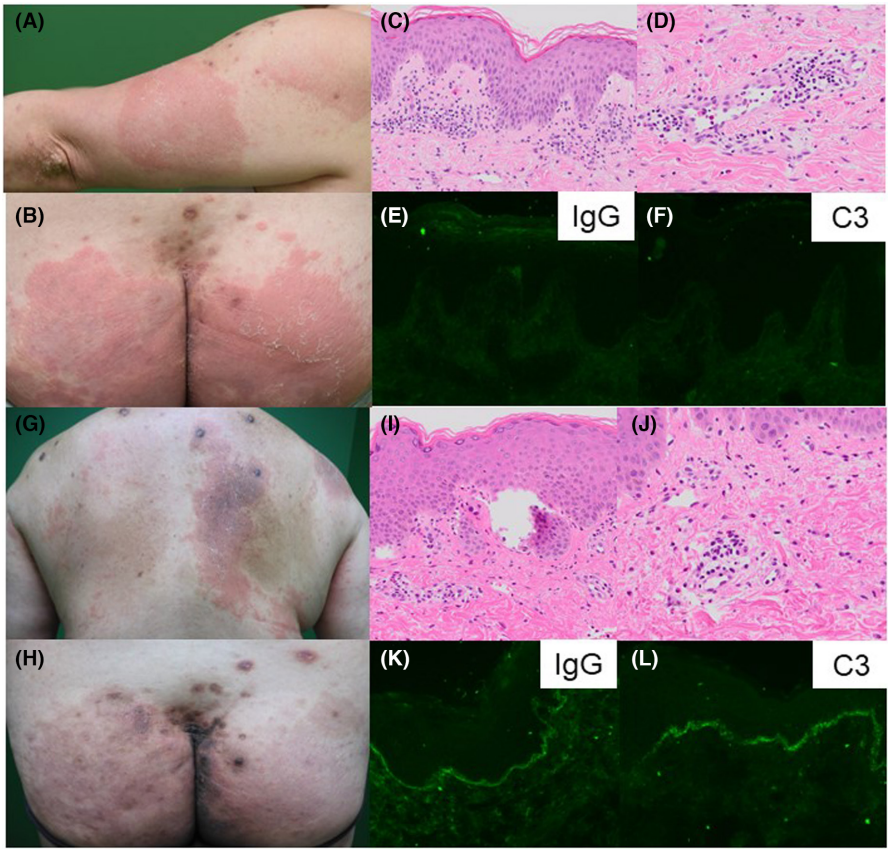

FIGURE 1 Clinical manifestations and histological analysis. (A, B) Clinical manifestation at the first visit to our department. (C, D) H&E staining and (E, F) DIF examination at the first visit. (G, H) Clinical manifestation of the persistent skin eruption by the oral corticosteroid administration. (I, J) H&E staining and (K, L) DIF examination of second histological analysis.

a small cleft at the BMZ with the infiltration of eosinophils in the dermis (Figure 1I,J). DIF also showed IgG and C3 depositions at the basement membrane zone (BZM). Therefore, we diagnosed her skin eruption as nonbullous pemphigoid (Figure 1K,L). Because the increased dose of prednisolone up to 45 mg per day (0.5 mg/kg) was still ineffective, steroid-pulse treatment was administrated, and her erythematous eruptions were improved.

Early diagnosis and treatment are one of the current problems in patients with nonbullous pemphigoid because of the high mortality rate.[2] The representative clinical manifestations are not specific characteristics, such as pruritus (98.5%), excoriations (76.5%), erythematous/urticaria plaques (52.3%), papules/nodules (30.9%), eczema (22.0%), and xerosis cutis (11.8%),[2] which might be not helpful to identify nonbullous pemphigoid, expected for the treatment persistency characteristics just in our case.

For further investigation, histological immunofluorescence or laboratory examinations are crucial for the diagnosis of nonbullous pemphigoid. The sensitivity of DIF was slightly lower than BP (nonbullous pemphigoid 81.1% vs. BP 90.0%), while indirect immunofluorescence was comparable between nonbullous pemphigoid (77.0%) and BP (76.2%).[3–5] Furthermore, the anti-BP230 antibody is also seen in nonbullous pemphigoid in the absence of the anti-BP180 antibody.[5] Therefore, the combination of DIF, IIF, and anti-BP230 antibody examinations might be useful for the identification of nonbullous pemphigoid.

Taken together, the persistent eruption with the positive anti-BP180 antibody is signed to initiate further histological examination in the case without any blister development. In addition, repeated histological analysis was recommended for the final diagnosis.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

ETHICS STATEMENT

Approval of the research protocol: Not applicable.

Informed Consent: Not applicable.

Registry and the Registration No. of the study/trial: Not applicable.

Animal Studies: Not applicable.

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