Coexistence of autoimmune bullous diseases (AIBDs) and psoriasis: A series of 145 cases

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Background: Many case reports have described the coexistence of autoimmune bullous diseases (AIBDs) and psoriasis. Among them, anti-laminin γ1 (p200) pemphigoid is the best known.

Objectives: We sought to characterize patients with AIBDs and psoriasis and to investigate common AIBDs occurring in these patients.

Methods: This retrospective study included 145 patients with coexisting AIBD and psoriasis given a diagnosis from January 1, 1996, to July 31, 2013, at an academic dermatology department. Of these, 134 were consultation cases regarding AIBD diagnosis.

Results: Ratio of male to female patients was 5.7:1. Psoriasis onset preceded AIBD onset in most patients. Mean age at AIBD onset was 65.4 years, and mean duration between psoriasis and AIBD onset was 14.6 years. Most cases had single AIBD, whereas 16 cases had combined AIBDs. Bullous pemphigoid was the most prevalent (63.4%) followed by anti-laminin γ1 pemphigoid (37.2%).

Limitations: Consultation cases may not have included mild AIBD cases.

Conclusion: This study confirmed the association of psoriasis and anti-laminin γ1 pemphigoid. However, because bullous pemphigoid is a much more common disease, it is seen more frequently in patients with psoriasis than anti-laminin γ1 pemphigoid. (J Am Acad Dermatol 2015;73:50-5.)

Key words: anti-laminin γ1 (p200) pemphigoid; autoimmune bullous disease; bullous pemphigoid; psoriasis; psoriasis vulgaris; pustular psoriasis.

The coexistence of autoimmune bullous diseases (AIBDs) and psoriasis was first reported as early as 1929.[1,2] Since then, there have been several case reports[3-5]; however, the relationship between AIBDs and psoriasis remains unclear. In 1985, a retrospective case-matched analysis of 62 patients with bullous pemphigoid (BP) and 62 control patients with leg ulcers revealed that the prevalence of psoriasis in patients with BP was significantly higher than that in control subjects.[6] In 2006, a literature review disclosed that 40 cases of coexisting psoriasis and BP had been reported since 1960 and that no difference was reported between classic psoriasis and psoriasis associated with BP.[7] In

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2011, a large-scale, population-based study of different comorbid diseases in patients with BP in Taiwan disclosed that psoriasis was significantly associated with BP (odds ratio 2.02; 95% confidence interval 1.54-2.66).[8] In 2000, we similarly studied 9 cases of anti-p200 pemphigoid, which was renamed as anti-laminin γ1 pemphigoid because of the determination of autoantibodies,[9] and disclosed that 4 cases had psoriasis.[10] In 2007, our literature review of anti-p200 pemphigoid since 1996 disclosed that psoriasis developed in 12 patients among 25 patients with anti-p200 pemphigoid,[11] in addition to cases included in our previous study.[10] On the basis of the frequent occurrence of psoriasis in patients with anti-laminin γ1 pemphigoid, patients with psoriasis presenting bullous lesions were suspected to develop anti-laminin γ1 pemphigoid. The close association of these 2 entities is evident; however, the origin of the coexistence remains unknown. In this study, we clinically and serologically examined 145 cases of coexisting AIBDs and psoriasis and revealed their characteristic features and disclosed the common AIBDs coexisting with psoriasis.

CAPSULE SUMMARY

- Autoimmune bullous diseases often develop in patients with psoriasis.
- In 145 patients with autoimmune bullous diseases and psoriasis, bullous pemphigoid was the most prevalent followed by anti-laminin γ1 pemphigoid.
- Bullous pemphigoid should be considered first in the setting of psoriasis and autoimmune bullous diseases, followed by anti-laminin γ1 pemphigoid.

METHODS

Population

Clinical and serological data of coexisting cases of AIBDs and psoriasis diagnosed from January 1, 1996, through July 31, 2013, were obtained from the database of the Department of Dermatology, Kurume University School of Medicine, Fukuoka, Japan. Of 145 cases, 134 were consultation cases, and the remaining 11 cases were from Kurume University. Only Japanese cases were enrolled in this study. This study was approved by the review board of Kurume University School of Medicine.

Diagnosis of bullous diseases

All patients in this study showed clinical evidence of bullae and/or erosion and histopathological evidence of subepidermal or intraepidermal bullae. Methods to determine autoantibodies included direct immunofluorescence, indirect immunofluorescence using normal-appearing human skin and 1 mol/L NaCl split skin, immunoblotting using normal human epidermal and dermal extracts, recombinant proteins of BP180NC16a domain and BP180 C-terminal domain, concentrated culture supernatant of HaCaT cells and purified human laminin 332, enzyme-linked immunosorbent assays for anti-BP180NC16a domain antibodies, anti-BP180 C-terminal domain antibodies, anti-BP230 antibodies, anti-collagen VII antibodies, and anti-desmoglein 1 and 3 antibodies. Final diagnoses were made on the basis of the constellation of these findings.

Diagnoses of psoriasis

The diagnosis of psoriasis and psoriatic arthritis was made by clinical manifestations and/or histopathological examinations, with or without radiologic analyses.

RESULTS

In this study, 145 patients (119 male, 21 female, 5 unknown) with AIBDs and psoriasis were enrolled (Table I). The overall patient age (mean ± SD) at AIBD onset was 65.4 ± 13.2 years (range, 26-91 years). Direct immunofluorescence data were available in 103 patients, and positive results were obtained in 99 patients. All sera that was negative or unavailable for direct immunofluorescence showed positive results in indirect immunofluorescence. Bullous disease developed in all but 4 patients after psoriasis onset. The overall mean ± SD duration from psoriasis to bullous disease onset was 14.6 ± 12.6 years (range, -3-60 years). (There were 4 patients who developed AIBD before psoriasis.) Twenty patients developed bullous lesions on the psoriatic plaque, and 6 patients developed bullous lesions on the normal-appearing skin. Of 141 patients in whom bullous diseases developed after psoriasis, 17 (12.1%) patients developed bullous lesions during the ultraviolet (UV) therapy. Regarding the treatment for AIBDs, we could not collect enough data. Our limited data showed that approximately 45% of AIBDs were controlled by systemic corticosteroids with or without cyclosporine, and additional corticosteroid pulse therapy and/or plasmapheresis were occasionally used. Approximately 15% of AIBDs were well controlled by minocycline and/or nicotinic acid. No psoriatic lesions were exacerbated by tapering of systemic corticosteroids.

Most of the AIBDs coexisting with psoriasis were single disease; however, 16 cases had combined AIBDs (Table II). In all, 78 (53.8%) patients had only BP. Among these patients, 71 showed positive