

Case 2

An 82 year-old Thai woman from Petchaburi

Chief complaint: Multiple erosions for 4 weeks



Present illness: An 82-year-old woman with a medical history of hypertension and DM type II presented with a 4-week history of blisters on her hands and feet that subsequently spread to the trunk and face. Blisters developed on sites of previously uninvolved skin and ruptured into erosions. She also complained of loss of nail on both big toes

Past history:

Hypertension and diabetes type II treated with amlodipine, enalapril and metformin respectively

Physical examination:

Vital signs: normal

A Thai female, not pale, no jaundice

HEENT: not pale, no jaundice, no oral ulcer, no conjunctival injection

Lymph node: no palpable lymph nodes

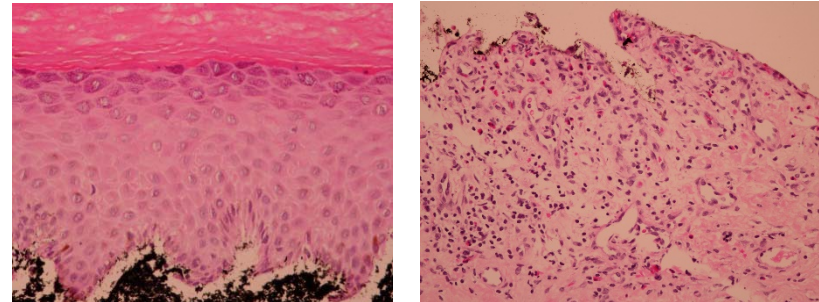
Breast: no palpable breast masses

Abdomen: no hepatosplenomegaly

Skin examination:

- Multiple, erosions on erythematous to violaceous patches and plaques on face, both ears, right axilla, abdomen, distal fingers and toes with anonychia of both big toes

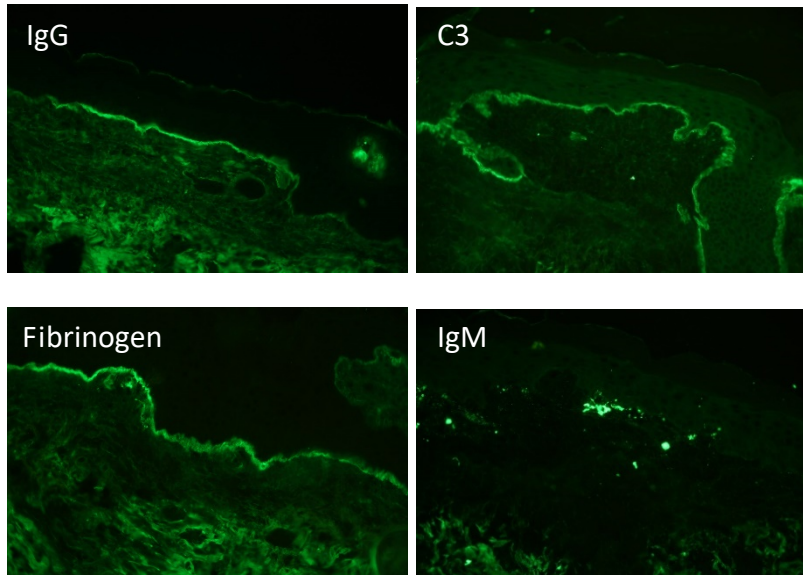
Histopathology: (S16-2111B, left big toe)



- Subepidermal vesicle with well-preserved dermal papilla
- Dense inflammatory-cell infiltrate of lymphocytes and numerous eosinophils in the papillary dermis

Direct immunofluorescence:

- Continuous linear deposition of IgG and C3 and Shaggy deposition of fibrinogen at the basement membrane zone
- Colloid of IgM



Diagnosis: Lichen planus pemphigoides

Treatment:

- 0.05% Clobetasol proprionate cream apply b.i.d
- 0.1% Momethasone furoate cream apply b.i.d
- Discontinued enalapril

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Discussion:

Lichen planus pemphigoides (LPP) is a rare, acquired autoimmune bullous dermatosis which is a combination of lichen planus (LP) and bullous pemphigoid (BP). It was introduced by Kaposi in 1982 as a typical case of lichen planus complicated by a widespread bullous eruption.¹ Later it was defined as lichen planus

pemphigoides in 1964.² The diagnosis of LPP is made by characteristic clinical, histopathological, and immunologic features.

Clinically, LPP is characterized by an abrupt onset of tense, dome-shaped bullae prior to, during, or after an eruption of lichen planus. The blisters may arise on uninvolved skin, or on preexisting lichenoid lesions.³⁻⁵ In LPP the lesions most commonly involve the distal extremities,^{6, 7} but they may occur in a generalized form. Oral and conjunctival mucosa involvement has been reported.^{8, 9} LPP more commonly affects males, usually in the fourth or fifth decade of life.⁶ Occasionally, childhood onset has been documented.⁵

Histopathologically, LPP is characterized by typical findings of lichenoid tissue reaction with subepidermal bullae and linear deposits of IgG and C3 along the BMZ on DIF of peribullous skin.¹⁰ Our patients fulfilled the clinical, histological, and immunofluorescent criteria of LPP. Furthermore, DIF in our patient revealed classic findings of continuous linear deposition of C3 and IgG and shaggy deposition of fibrinogen along the BMZ.

The pathogenesis of LPP is incompletely elucidated. Some authors hypothesized that a primary inflammatory process by LP causes the release and exposure of hidden antigen leading to a secondary autoimmune response against the BMZ. These circulating autoantibodies induce secondary subepidermal bullous dermatosis. Many cases of LPP reported in the literature have demonstrated IgG antibodies to either one or both, BP180 and BP230 antigens.¹¹ Zillikens et al. demonstrated antibody reactivity in LPP against a novel epitope of region 4 of the NC16A domain of BP180 antigen besides regions 2 and 3.5. This finding was not demonstrated in sera from patients with BP which indicate that the immunological pattern in LPP differs from that in patients with BP.¹¹

We were not able to conduct immunoblotting studies on our patient; however the BP180 ELISA using a commercial kit was positive in this patient.

LPP has been reported to be induced by medications such

as ACE inhibitor; ramipril,^{12, 13} captopril,^{14, 15} and cinnarizine,¹⁶ malignancies,⁶ phototherapy,¹⁷ and hepatitis B infection.¹⁸

In most cases of LPP, low to moderate doses of oral corticosteroid seems to be effective. In some cases, only topical corticosteroid administration was shown to be effective. There is little information about therapy with other immunosuppressant drugs or combination with corticosteroid for LPP.⁶

The prognosis of LPP seems to be better compared to BP and LP. The rate of recurrence was about 20% and the response after treatment was about 1-12 months, which appears to be lower compared with BP and LP.

In our case, LPP was treated with potent topical steroid and enalapril was discontinued. The patient had gradually resolution of the cutaneous lesions with no recurrence.

References

1. Kaposi M. Lichen ruber pemphigoides. Arch J Dermatol Syph 1892;24:343-6.
2. Sarkany I, Caron GA, Jones HH. LICHEN PLANUS PEMPHIGOIDES. Trans St Johns Hosp Dermatol Soc 1964;50:50-5.
3. Tamada Y, Yokochi K, Nitta Y, Ikeya T, Hara K, Owaribe K. Lichen planus pemphigoides: identification of 180 kd hemidesmosome antigen. J Am Acad Dermatol 1995;32:883-7.
4. Willsteed E, Bhogal BS, Das AK, Wojnarowska F, Black MM, McKee PH. Lichen planus pemphigoides: a clinicopathological study of nine cases. Histopathology 1991;19:147-54.
5. Cohen DM, Ben-Amitai D, Feinmesser M, Zvulunov A. Childhood lichen planus pemphigoides: a case report and review of the literature. Pediatr Dermatol 2009;26:569-74.
6. Zaraa I, Mahfoudh A, Sellami MK, Chelly I, El Euch D, Zitouna M et al. Lichen planus pemphigoides: four new cases and a review of the literature. Int J Dermatol 2013;52:406-12.
7. Bouloc A, Vignon-Pennamen MD, Caux F, Teillac D, Wechsler J, Heller M et al. Lichen planus pemphigoides is a heterogeneous disease: a report of five cases studied by immunoelectron microscopy. Br J Dermatol 1998;138:972-80.
8. Mignogna MD, Fortuna G, Leuci S, Stasio L, Mezza E, Ruoppo E. Lichen planus pemphigoides, a possible example of epitope spreading. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2010;109:837-43.
9. Sultan A, Stojanov IJ, Lerman MA, Kabani S, Haber J, Freedman J et al. Oral lichen planus pemphigoides: a series of four cases. Oral Surg Oral Med Oral Pathol Oral Radiol 2015;120:58-68.
10. Sekiya A, Kodera M, Yamaoka T, Iwata Y, Usuda T, Ohzono A et al. A case of lichen planus pemphigoides with autoantibodies to the NC16a and C-terminal domains of BP180 and to desmoglein-1. Br J Dermatol 2014;171:1230-5.
11. Zillikens D, Caux F, Mascaro JM, Wesselmann U, Schmidt E, Prost C et al. Autoantibodies in lichen planus pemphigoides react with a novel epitope within the C-terminal NC16A domain of BP180. J Invest Dermatol 1999;113:117-21.
12. Ogg GS, Bhogal BS, Hashimoto T, Coleman R, Barker JN. Ramipril-associated lichen planus pemphigoides. Br J Dermatol 1997;136:412-4.
13. Zhu YI, Fitzpatrick JE, Kornfeld BW. Lichen planus pemphigoides associated with ramipril. Int J Dermatol 2006;45:1453-5.
14. Ben Salem C, Chenguel L, Ghariani N, Denguezli M, Hmouda H, Bouraoui K. Captopril-induced lichen planus

- pemphigoides. *Pharmacoepidemiol Drug Saf* 2008;17:722-4.
15. Flageul B, Foldes C, Wallach D, Vignon-Pennamen MD , Cottenot F. Captopril-induced lichen planus pemphigoides with pemphigus-like features. A case report. *Dermatologica* 1986;173:248-55.
 16. Miyagawa S, Ohi H, Muramatsu T, Okuchi T, Shirai T , Sakamoto K. Lichen planus pemphigoides-like lesions induced by cinnarizine. *Br J Dermatol* 1985;112:607-13.
 17. Mandy Chan WM, Lee JS, Thiam Theng CS, Chua SH , Boon Oon HH. Narrowband UVB-induced lichen planus pemphigoide. *Dermatol Reports* 2011;3:e43.
 18. Jang SH, Yun SJ, Lee SC , Lee JB. Lichen planus pemphigoides associated with chronic hepatitis B virus infection. *Clin Exp Dermatol* 2015;40:868-71.