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Subungual haemorrhage in a patient with pemphigus vulgaris

A 35-year-old woman, who had developed pemphigus vulgaris (PV) in November 2020, had been treated with oral prednisone (60 mg/d). After remission, prednisone was gradually reduced to 5 mg/d. She discontinued the treatment in September 2021 and suffered a relapse one month later, manifesting with recurrent episodes of localized oral erosions. In January 2022, the rash spread to the patient's trunk and extremities, so she visited our hospital. Physical examination revealed widespread erosions of varying sizes all over her body (*figure 1A*). The hard and soft palate, buccal mucosa, gingiva, and tongue margins were also involved. As the rash became severe, subungual haemorrhage occurred on multiple fingernails and toenails with no obvious periungual inflammation (*figure 1B-D*). Histological examination of the patient's dorsal lesions revealed intraepidermal/suprabasal acantholytic blisters. Enzyme-linked immunosorbent assay (ELISA) revealed serum anti-desmoglein (Dsg)1 IgG autoantibodies (117.2 U/mL; normal value <20 U/mL) and anti-Dsg3 IgG autoantibodies (152.8 U/mL; normal value <20 U/mL). Platelet counts, prothrombin time, activated partial thromboplastin time and thrombin time were within normal range. We prescribed treatment with methylprednisolone (60 mg/d). Since the patient's subungual haemorrhages were painless and limited, we did not prescribe additional treatment. The skin lesions and subungual haemorrhage improved simultaneously. Five weeks after treatment, the subungual clots gradually moved towards the distal nail ends, along with the nail growth. Onychomadesis developed in the previously affected nails, and intra-ungual haemorrhage was also noted (*figure 1E*). The newly grown nails were intact with no permanent disfigurement.

Subungual haemorrhage is a rare finding in PV, and was found in 2% and 7.8% of cases in two reports involving 448 and 64 patients, respectively [1, 2]. Other PV-related nail lesions include paronychia, onychomadesis, onycholysis, Beau's lines, trachyonychia, onychorrhexis, subungual hyperkeratosis, pterygium, nail dystrophy, nail discolouration, cross ridging, haemorrhagic nails, periungual vegetating and verrucous lesions [1-3].

Other skin disorders may cause patchy subungual haemorrhage, including skin trauma, nail neoplasms, blue toe syndrome, autosomal recessive congenital ichthyosis, hydroa vacciniforme and Langerhans-cell histiocytosis. Apart from skin diseases, haematological disorders, diabetes mellitus, and some drugs can also cause patchy subungual haemorrhage. Our patient had no such cutaneous or systemic diseases. Moreover, the subungual haemorrhages appeared during the period of maximum severity of PV and regressed after effective PV treatment with glucocorticoids, suggesting that this finding resulted from the involvement of nails due to PV. To the best of our knowledge, splinter haemorrhage, which is another form of nail bleeding, has not been reported in PV.

Although PV-related intraepidermal acantholysis does not affect subepidermal blood vessels, haemorrhagic rashes, such as angina bullosa haemorrhagica-like lesions and postmenopausal bleeding, have been reported in PV patients [4, 5]. A similar condition may occur in the nails. Slight pressure on the hard nail plate might aggravate PV-induced intraepidermal cleavage at the nail matrix, resulting in the separation of the nail plate from the nail matrix and the disruption of the epithelial-connective tissue junction, which might damage dermal blood vessels and cause nail haemorrhage. The incidence of intra-ungual haemorrhage further supports the involvement of the nail matrix in our PV patient. The limited haemorrhage in the nail matrix might be incorporated into the nail plate by subsequently formed nail keratin [6]. Detailed histological examination and direct immunofluorescence are required to elucidate the underlying mechanism of PV-associated nail haemorrhage, however, nail biopsy may lead to permanent nail deformity, and for this reason, this was not performed.

In conclusion, the patchy pattern of subungual haemorrhage may be a unique clinical feature of PV. Pemphigus-induced subungual and intra-ungual haemorrhages have the following characteristics [3, 7-9]: (1) multiple fingernails and toenails are typically involved; (2) they are distributed in the area of the nail matrix; (3) onychomadesis may occur following the haemorrhage, but nail recovery is usually complete with no permanent disfigurement; and (4) they are associated with

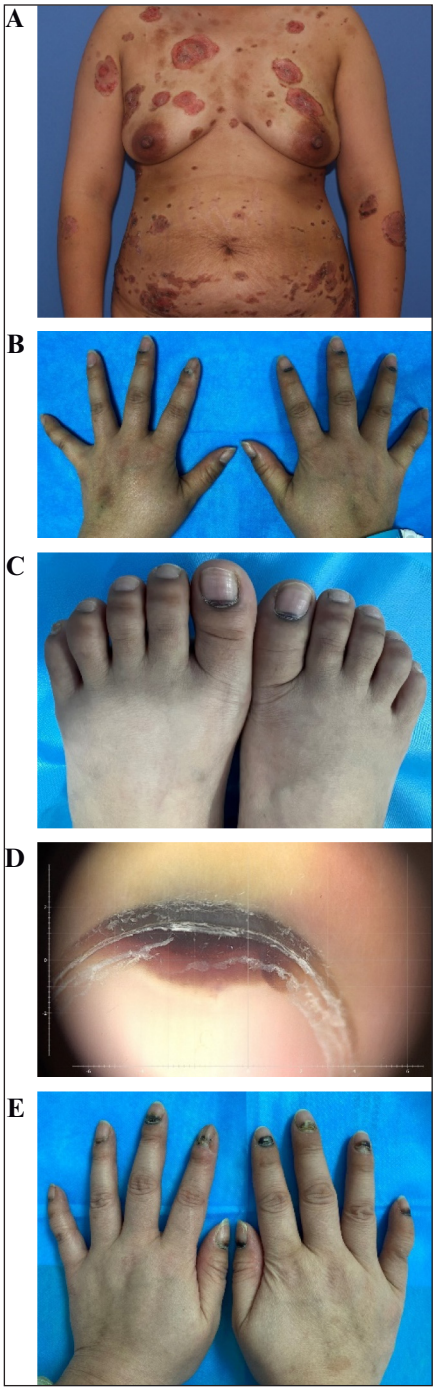

Figure 1. **A**) Widespread erosions of varying sizes. **B**) Subungual haemorrhage of the fingernails. **C**) Subungual haemorrhage of the toenails. **D**) Dermoscopy shows subungual haemorrhage under the proximal nail fold, cuticle, and lunula. **E**) Five weeks after treatment, the subungual clots moved towards the distal ends of the nails; onychomadesis developed in the previously affected nails, and dry blood scabs ae visible between the multiple layers of the nail plate of the right middle finger.

exacerbation or relapse of PV. We believe subungual and intra-ungual haemorrhages might serve as a clinical sign of severe or acute progression of PV. ■

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Psoriasiform lesions induced by anti-PD-1 antibody

A 72-year-old man presented with a 10-day history of pruritic rashes on the trunk and limbs. Two years ago, the patient underwent laparoscopic radical right