

## CORRESPONDENCE

# Development of venous thromboembolism in an elderly man with plaque psoriasis and antiphospholipid syndrome: A case report

A 76-year-old Japanese man with a 10-year history of plaque psoriasis presented with the right thigh swelling for 3 days on a routine follow-up. He was overweight (body mass index, 28.3), had a history of hypertension and hepatitis B virus (HBV) infection, and was a current smoker. He spent most of his time in bed since his retirement a year ago. Physical examination showed extensive right thigh swelling and tenderness with purpura (Figure 1A). Laboratory examination revealed a D-dimer level of 13.3  $\mu\text{g/ml}$  (reference range, 0.0–1.0). Therefore, deep venous thrombosis (DVT) was suspected; however, he refused to undergo further testing at that time. A week later, the swelling exacerbated (Figure 1B) and extended to his right toe. He was conscious, afebrile, and reported no shortness of breath. This time, he agreed to undergo imaging studies. Contrast-enhanced computed tomography revealed DVT from the right femoral vein to the inferior vena cava and in the left popliteal vein. Additionally, pulmonary embolism was observed. Thus, the patient was diagnosed with venous thromboembolism (VTE).

Serology testing for the underlying clinical conditions of VTE detected lupus anticoagulant (LA, 1.34; reference range, <1.30) and increased anticardiolipin-IgG-antibody (aCL-IgG, 52 U/ml; reference range, <10 U/ml) and anti- $\beta$ 2-glycoprotein I antibody (anti- $\beta$ 2GPI, 14.4 U/ml; reference range, <3.5 U/ml). Consequently, the patient was diagnosed with antiphospholipid syndrome (APS) and was treated with anticoagulants. Repeated testing >12 weeks apart showed LA of 1.87 and increased aCL-IgG (42 U/ml) and anti- $\beta$ 2GPI (20.7 U/ml), meeting the revised Sapporo APS classification criteria.<sup>1,2</sup>

His psoriatic lesions were mild (i.e., Psoriasis Area and Severity Index, 5.6) under topical treatments at admission; however, significant recurrence of lesions requiring systemic treatment was noted 9 months after discharge (Figure 1C–D). Because of his advanced age and comorbidities including mild heart failure, HBV infection, and APS, biologics or other oral agents were avoided, and he was treated with apremilast. Four months after the initiation of apremilast, the skin lesions had considerably improved without the recurrence of VTE or other complications (Figure 1E–F).

Considering the growing evidence that suggests that patients with psoriasis have an increased risk of VTE, timely recognition, and the management of risk factors for VTE are crucial to prevent thrombotic events. A 1987 study has reported a significant increase of aPL-positive patients with psoriatic arthritis.<sup>3</sup> However, a 2008 study has shown that aPL levels were not increased among patients with plaque psoriasis as compared to healthy controls.<sup>4</sup> Similar to the case we presented, there is a reported case of a patient with psoriasis and APS developing portal vein thrombosis.<sup>5</sup> Additionally, there are several case reports on APS in patients with psoriasis associated with infliximab and adalimumab.<sup>6,7</sup> APS prevalence in patients with psoriasis diagnosed with VTE remains unknown because psoriasis<sup>8</sup> and its common comorbidities are well-known risk factors of VTE, which may preclude physicians from screening for aPL. However, when VTE occurs, screening for aPL in these patients is essential because the treatment strategy to prevent the recurrence of thrombosis is different for aPL-positive patients.<sup>9</sup>

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**FIGURE 1** Clinical features. (A) Deep vein thrombosis at the first presentation. Extensive right thigh swelling and tenderness with purpura. (B) Exacerbated lesion a week after the initial presentation. (C, D) Significant recurrence of psoriatic skin lesions 9 months after discharge. (E, F) Psoriasis had improved after the administration of apremilast for 4 months



#### KEYWORDS

antiphospholipid syndrome, deep vein thrombosis, psoriasis, pulmonary embolism, venous thromboembolism

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#### CONFLICT OF INTEREST

The authors declare no conflicts of interest.

#### PATIENT CONSENT

The patient gave written informed consent to publish his photographs and case details.

#### DECLARATION SECTION

Approval of research protocol: N/A.

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Registry and the Registration No. of the study/trial: N/A.

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