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CORRESPONDENCE

Relapsing erythema nodosum-like eruption in a patient with granulomatosis with polyangiitis

Granulomatosis with polyangiitis (GPA), previously known as Wegener's granulomatosis, is an antineutrophil cytoplasmic antibody (ANCA)-associated systemic vasculitis characterized by necrotizing granulomatous inflammation that predominantly affects small- and medium-sized vessels.[1] Skin symptoms are observed in approximately 30%–50% of patients with GPA.[2] Cutaneous manifestations vary; palpable purpura is the most common finding, and papules, hemorrhagic bullae, ulcers, and subcutaneous nodules also occur frequently; pustules, vesicles, macules, and petechiae are less frequent.[2]

A 61-year-old woman was referred to our clinic to evaluate reddish nodules on her lower extremities. She had been diagnosed with GPA 9 years ago. She presented with high fever, bloody nasal discharge, pulmonary nodules due to histopathologically granulomatous inflammation, oral ulcers, and hematuria at the time of initial diagnosis. She was treated with oral corticosteroids and intravenous cyclophosphamide (IVCY). The patient repeatedly presented with erythema nodosum (EN)-like cutaneous eruptions at the time of disease relapse during the follow-up period. Cytoplasmic ANCA and proteinase 3 ANCA were negative throughout the follow-up period. During the current presentation, multiple EN-like indurated erythematous lesions on the lower legs were observed (Figure 1A). Skin biopsy of an indurated erythema showed lymphocytic infiltration into the subcutaneous vein and occlusion of the vessel lumen by fibrointimal proliferation (Figure 1B–D). The EN-like skin symptoms were thought to have resulted from subcutaneous vasculitis in GPA. Subsequently, the patient received IVCY, followed by oral corticosteroids and azathioprine. Six years after the initial skin biopsy, the patient developed eruptions on her legs after having flu-like symptoms and was referred to our clinic again. On examination, multiple EN-like eruptions were observed on the lower legs and dorsal foot (Figure 1E). Skin biopsy showed septal panniculitis with mixed cell infiltration; however, no histological evidence of vasculitis was observed even on serial sections (Figure 1F,G). A higher dose of oral corticosteroid was administered, which led to the improvement of the skin lesions.

No single skin manifestation has been clearly identified as pathognomonic of GPA.[3] However, palpable purpura is the most frequent skin symptom (47%), and leukocytoclastic vasculitis is the most common pathological pattern (80%).[3] EN-like eruption is not considered a typical skin symptom, and multiple dermatologic manifestations are normally observed in GPA.[4] To the best of our knowledge, this is the first report demonstrating an EN-like eruption as a solo vasculitis-associated cutaneous manifestation in GPA. A previous report described a patient with GPA demonstrating EN-like subcutaneous nodules and septal panniculitis without histologically evident vasculitis.[5] This patient also had palpable purpura, which resulted from the involvement of cutaneous small vessels. By contrast, our patient did not show any skin manifestations associated with small vessel vasculitis, including purpura, papules, and bullae. Our findings suggest that EN-like eruptions, commonly observed in medium-sized vasculitis such as polyarteritis nodosa, can appear solely in GPA.

As EN-like eruption is a relatively rare cutaneous manifestation in GPA, dermatologists should be mindful that EN-like eruption alone can be a cutaneous symptom of GPA if subcutaneous medium-sized vessels are exclusively affected.

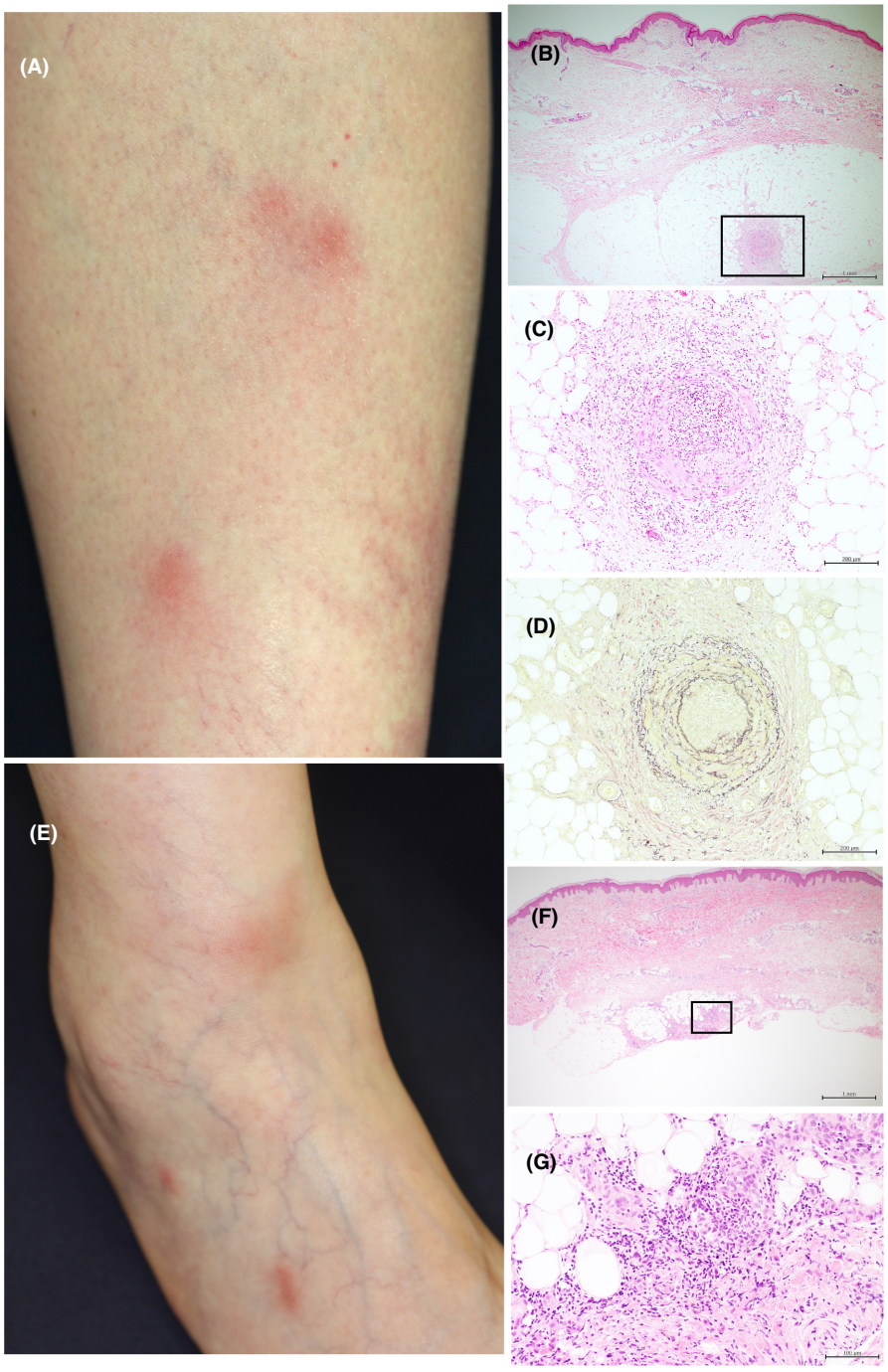

FIGURE 1 Clinical and histopathological features. (A) Indurated erythematous lesions on the lower leg. (B) Histological examination showed the subcutaneous muscular vessel infiltrated by inflammatory cells with focal panniculitis surrounding the involved artery (hematoxylin–eosin, ×20). (C) A magnified image showed lymphocytic infiltration to the vessel, where the lumen is occluded by fibrointimal proliferation (hematoxylin–eosin, ×100). (D) Elastica van Gieson staining revealed the concentric bundled smooth muscle pattern as a discontinuous wreath, indicating that the involved vessel was a vein (×100). (E) Indurated erythematous lesions on the dorsal region of the foot. (F) Histological examination showed septal panniculitis (hematoxylin–eosin, ×20). (G) A magnified image showed inflammatory cell infiltrates mainly composed of lymphocytes, histiocytes, and a few neutrophils with the fragmentation of nuclei (hematoxylin–eosin, ×200).

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DECLARATION SECTION

Approval of the research protocol: The study protocol was approved by the ethics committee of Tokyo Women's Medical University (#2020-0084). The study was conducted in compliance with the ethical principles of the Declaration of Helsinki.

Informed Consent: Since this study was a retrospective study, explanations and consents to patients were made by opting out on the Tokyo Women's Medical University website.

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

Animal Studies: N/A.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

Satomi Imamoto MD
Chie Miyabe MD, PhD
Ryujin Miyata MD
Yasuko Fukuya MD, PhD
Naoko Ishiguro MD, PhD

Department of Dermatology, Tokyo Women's Medical University, Tokyo, Japan

Correspondence

Chie Miyabe, Department of Dermatology, Tokyo Women's Medical University, 8-1 Kawadacho, Shinjuku-ku, Tokyo 162-8666, Japan.

Email: cmderma.ak@twmu.ac.jp

ORCID

Chie Miyabe https://orcid.org/0000-0003-3051-4179

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