

# Warfarin-induced bullous hemorrhagic dermatosis: an unusual side effect

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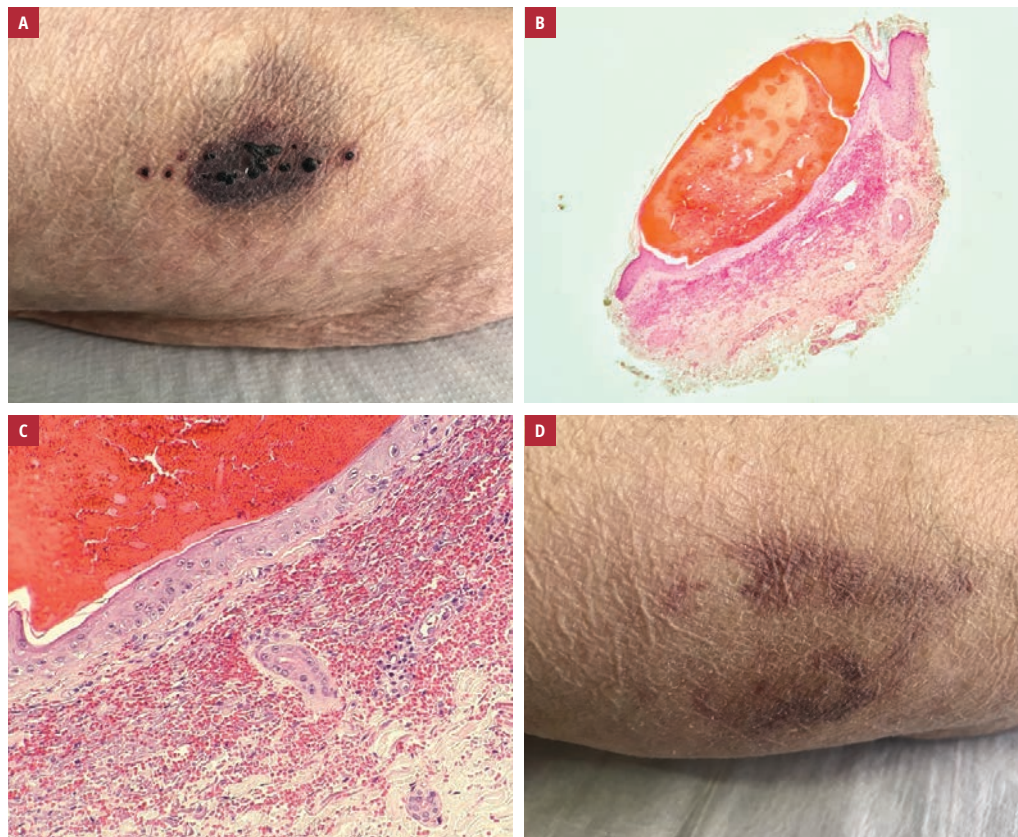
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A 70-year-old woman presented to the cardiology department with complaints of dizziness, epistaxis, and black-colored bullous lesions on the forearm despite no history of syncope or trauma (FIGURE 1A). The patient was treated for hypertension and permanent atrial fibrillation

(AF) with ramipril, warfarin, and bisoprolol. Physical examination was unremarkable except arrhythmia and the forearm lesion. Laboratory evaluation revealed elevated international normalized ratio (INR) levels (5.2), prolonged prothrombin time (29.8 s), mild anemia



**FIGURE 1** A 70-year-old woman treated with warfarin; **A** – black-colored bullous lesions seen on the forearm; **B** – skin biopsy showing the subcorneal blister filled with erythrocytes (hematoxylin and eosin [H&E] staining, magnification  $\times 40$ ); **C** – no sign of skin necrosis (H&E staining, magnification  $\times 200$ ); **D** – the lesions regressed spontaneously after adjusting warfarin dose.

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(hemoglobin, 10.8 g/dl), and normal platelet count ( $191 \times 10^3/\text{mm}^3$ ). Black-colored bullous lesions underwent dermatological examination, and one of the blisters was removed with intact skin for histologic examination. A subcorneal blister filled with erythrocytes and erythrocyte extravasation in the superficial dermis was revealed on hematoxylin and eosin staining (FIGURE 1B). There was no evidence suggesting skin necrosis or vasculitides, such as infiltration of vessel walls by neutrophils, thrombosis, or fibrin extravasation (FIGURE 1C). Consequently, the biopsy revealed bullous hemorrhagic dermatosis. During follow-up, the INR value decreased to the therapeutic range (2.1) after adjusting warfarin dosage, and the lesions regressed spontaneously (FIGURE 1D).

Hemorrhagic dermatosis is a rare clinical disorder, which is usually associated with treatment with unfractionated heparin<sup>1</sup> or low-molecular-weight heparin.<sup>2</sup> The lesions are histopathologically characterized by intraepidermal bullae without features of vasculitis, thrombosis, or inflammation. Hemorrhagic dermatosis secondary to warfarin treatment is extremely rare, and to the best of our knowledge, this is the second case described in the literature.<sup>3</sup>

#### ARTICLE INFORMATION

**CONFLICT OF INTEREST** None declared.

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