Phlegmasia cerulea dolens presenting with lower extremity cellulitis symptomology: a case report

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INTRODUCTION

Phlegmasia cerulea dolens (PCD) is a rare and severe complication of extensive deep vein thrombosis (DVT) that can result in limb loss or death if not promptly recognized. This case is unique because PCD developed in a patient despite recent anticoagulation and presented with atypical clinical findings that mimicked severe cellulitis.

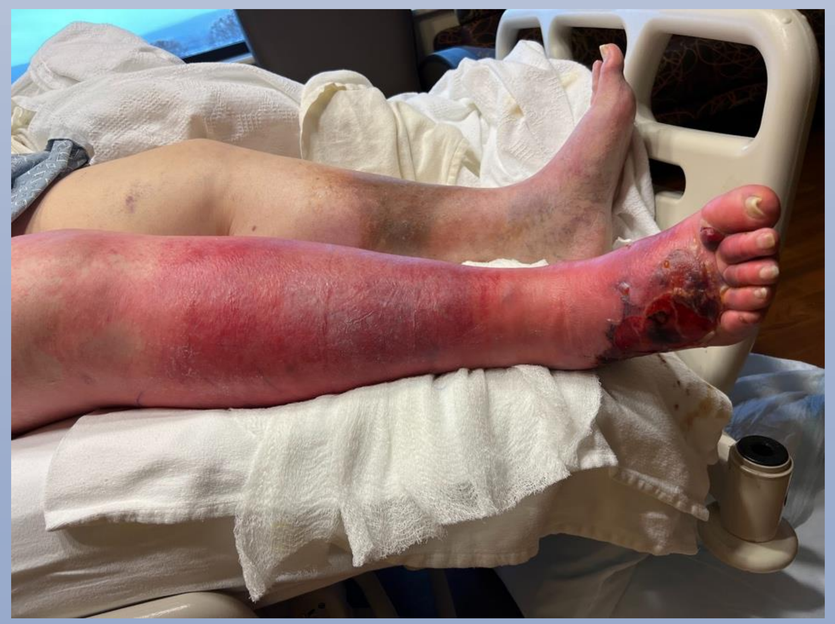

Image. 1. Extensive violaceous discoloration, edema, and ulcerations of the affected limb.

CASE PRESENTATION

A 69-year-old man with a history of deep vein thrombosis, pulmonary embolism, type 2 diabetes mellitus, hypertension, heart failure, and other comorbidities presented with rapidly progressive skin changes of the right lower extremity shortly after discharge on apixaban for a contralateral pulmonary embolism. One day after discharge, he developed worsening erythema, edema, and bullae of the right leg and returned to the emergency department following a ground-level fall. Examination revealed a markedly edematous extremity with violaceous erythema, tense non-pitting edema, and multiple bullae with serous drainage. He was admitted with presumed cellulitis and treated with intravenous cefazolin, later escalated to vancomycin and piperacillin–tazobactam, with the addition of clindamycin for possible toxin-mediated infection. Despite broad-spectrum antibiotics, the erythema extended beyond marked borders, new bullae formed, and edema worsened, progressing more rapidly than expected for an infectious process and raising concern for an alternative underlying diagnosis other than cellulitis, erysipelas, or impetigo. He remained afebrile, normotensive, with no leukocytosis, and negative blood cultures. Given the worsening dermatologic presentation despite maximal antimicrobial therapy, the patient was transferred for urgent vascular intervention. At the time of transfer, the right leg remained markedly swollen, warm, and erythematous extending from the distal foot to the medial thigh. After informed consent was obtained, the patient underwent catheter-directed thrombectomy for extensive iliofemoral venous thrombosis presenting as phlegmasia cerulea dolens. Ultrasound-guided popliteal vein access was obtained, and mechanical thrombectomy with adjunctive balloon angioplasty was performed to re-establish venous patency.

DISCUSSION

Immediately following the procedure, the limb demonstrated marked improvement in color, signifying prompt restoration of venous drainage. These findings were consistent with severe venous congestion and ischemic compromise secondary to phlegmasia cerulea dolens. A few days later, the patient was determined safe for discharge due to adequate pain control during stay, no signs of acute infection, and improved blood flow to the right lower extremity. The patient was discharged on oral Bactrim and was scheduled at a wound clinic for continued dressing changes and management. This case shows the need for careful dermatologic assessment in patients with rapidly evolving limb edema and discoloration, even in the absence of systemic signs of infection.

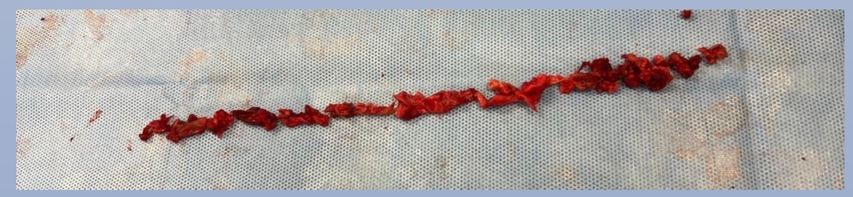

Image. 2. Surgically removed iliofemoral venous thrombus

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