Dermatology Practical & Conceptual

Symmetrical Peripheral Gangrene Due to Disseminated Intravascular Coagulation

Sweta Subhadarshani[1], Manik Aggarwal[1], Vinod Kumar[2]

1 Department of Dermatology and Venereology, All India Institute of Medical Sciences, New Delhi, India
2 Department of Medicine, All India Institute of Medical Sciences, New Delhi, India

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Corresponding author: Sweta Subhadarshani, MD, MRCP(SCE), Department of Dermatology and Venereology, All India Institute of Medical Sciences, New Delhi, India. Email: shweta.aiims07@gmail.com

Introduction

Symmetrical peripheral gangrene (SPG) is a rare but severe complication of disseminated intravascular coagulation (DIC) characterized by symmetrical distal ischemic damage that leads to gangrene at 2 or more sites [1]. It occurs in the absence of large blood vessel obstruction, with vasoconstriction rather than thrombosis being implicated as the underlying pathophysiology. DIC arising from sepsis results in uncontrolled activation of the coagulation pathway, and the use of vasopressors simultaneously involves the creation of spasms that affect the vessels; these spasms aggravate microcirculation problems which result in gangrene [2].

Case Presentation

A 64-year-old man with no known comorbidities presented to the emergency department with fever, acute-onset right abdominal pain, and decreased urine output for the preceding 3 days. He had a fever (38°C), tachycardia (102 beats/minute), tachypnea (29 breaths/minute), hypotension (88/56 mm Hg), and epigastric tenderness. Ultrasound of the abdomen revealed choledocholithiasis. Cholangitis was diagnosed. The patient was started on parenteral antibiotics and inotropic agents, and percutaneous transhepatic biliary drainage was performed. However, his condition continued to deteriorate and purpuric lesions developed on the skin. On examination he had SPG of the fingers (Figure 1A) along with retiform purpura on the feet (Figure 1B).

Hematological examination revealed thrombocytopenia (14,000 cells/mm^3), raised prothrombin time (patient: 17 seconds, control: 13 seconds) and elevated D-dimer level (>0.5). Blood cultures were obtained and were positive for *Acinetobacter*. The diagnosis of sepsis-induced DIC with SPG and purpura fulminans was established. The patient was managed in the intensive care unit with antibiotics, blood components, and inotropes, but he succumbed to his condition in the next 4 days.

Figure 1. (A) SPG of fingers. (B) Purpura over the patient's leg in a reticular pattern. [Copyright: ©2019 Subhadarshani et al.]

Conclusions

SPG carries very high mortality rates and is almost always associated with DIC. In a brief review of the literature we did not find any cases of SPG occurring in a setting of cholangitis with *Acinetobacter*.

References

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