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Symmetric Peripheral Gangrene

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A 58-YR-OLD man with septic shock and disseminated intravascular coagulation (DIC) secondary to pyelonephritis was admitted to the intensive care unit. The blood pressure was 80/60 mmHg, and the echocardiogram showed diffuse severe hypokinesis. The patient was treated with antibiotics, recombinant thrombomodulin, continuous hemofiltration/hemodialysis, and mechanical ventilation. The patient received vasoactive agents, including norepinephrine, dopamine, and dobutamine. Three days after admission, all digits in the four extremities exhibited progressive pallor. Administration of norepinephrine was discontinued. Over the next 3 days, symmetric peripheral gangrene developed (fig.). The blood culture revealed the presence of *Escherichia coli*. With continued supportive treatments, the patient recovered quickly without additional spread of the skin lesion. The patient underwent amputations of the affected digits.

Symmetric peripheral gangrene is a condition that often is associated with sepsis and DIC.¹ It may present as part of purpura fulminans secondary to sepsis and DIC.² Digital ischemia caused by a combination of the low systemic perfusion state and peripheral vasoconstriction induced by septic shock and catecholamines may cause or exacerbate symmetric peripheral gangrene.¹

Various therapies to modulate inflammation and coagulation have been attempted for the treatment of sepsis and DIC.³ However, no definitive treatment other than the

amputation of necrotic digits has been established for symmetric peripheral gangrene. Treatment of the underlying infection with antibiotics and supportive therapies to improve systemic and peripheral perfusion should be the mainstays of care for patients with symmetric peripheral gangrene associated with sepsis and DIC.²

References

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