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INFECTIOUS DISEASES (BACTERIAL, FUNGAL, VIRAL, PARASITIC, INFESTATIONS)

SEPTIC VASCULOPATHY FROM VIBRIO VULNIFICUS INFECTION

Ellie Choi⁽¹⁾ - Kong Bing Tan⁽²⁾ - Nisha Suyien Chandran⁽³⁾

Nuhs, National University Hospital, Dermatology, Singapore, Singapore⁽¹⁾ - Nuhs, National University Hospital, Pathology, Singapore, Singapore⁽²⁾ - Nuhs, National University Hospital, Dermatology, Singapore, Singapore⁽³⁾

Background: Cutaneous lesions in a septic patient can arise from four main pathogenic mechanisms. 1. Disseminated intravascular coagulation, 2. Direct vessel wall invasion by microorganisms, 3. Immune mediated vasculitis, and 4. Septic embolism from a distinct source. They can range from macules and papules to urticarial plaques, purpura, bullae, ecthyma and gangrene. We present a case of septic vasculopathy secondary to Vibrio vulnificus primary bacteraemia.

Observation: A 54-year-old male with diabetes, alcoholic liver disease and hepatocellular carcinoma was admitted to the intensive care unit for septic shock. He was febrile, hypotensive, tachycardic with a generalised erythematous rash. He was given intravenous fluids, empiric antibiotics and started on inotropes. A computed tomography scan of the abdomen did not show a definite source of sepsis.

The next day on dermatological review, the rash had developed into dusky purpuric macules and plaques. Cutaneous histology showed fibrin microthrombi in superficial blood vessels and an inflammatory cellular infiltrate. Cultures from the skin and blood both grew Vibrio vulnificus. The patient continued to deteriorate and demised on the second day of admission.

Key Message: V. vulnificus is a gram-negative comma-shaped rod that is commonly found in warm seawaters. It is acquired in predominantly two ways: first from ingestion of raw or undercooked seafood, which results in a primary septicaemia, and the second via exposure of an open wound to seawater containing V. vulnificus, which results in a primary cutaneous infection. Patients with V. vulnificus bacteraemia commonly present with septic shock, and mortality is up to 50% in septic patients, with most dying within 48 hours of admission. Therefore, in addition to early recognition and treatment, prevention by avoidance of raw seafood and exposure to seawater in those with underlying risk factors is of importance in preventing this frequently fatal condition.





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