



Photo Quiz: Overwhelming Sepsis after Dog Bite in a Splenectomized Woman

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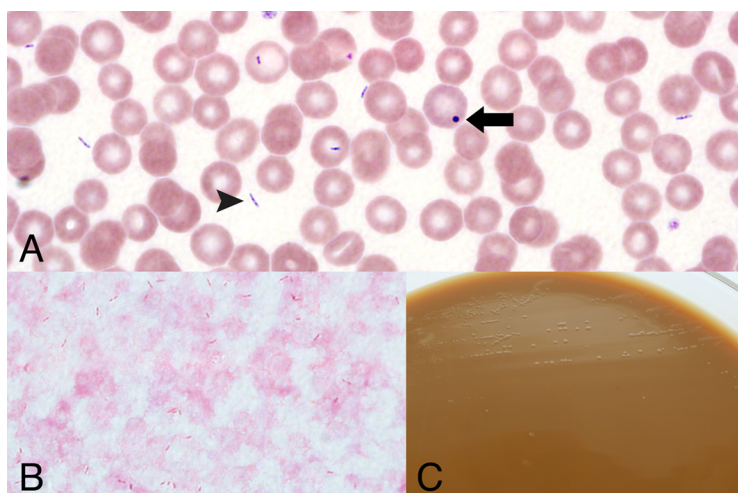


FIG 1 (A) Extracellular organisms (arrowhead) and Howell-Jolly bodies (arrow) on peripheral blood smear; (B) fusiform Gram-negative bacilli; (C) subculture on chocolate agar after 5 days of incubation.

A 67-year-old female presented with fever, rigors, vomiting, and progressively worsening mental status, which had developed over the previous 24 h. She had a past medical history of osteoarthritis and hyperlipidemia, which were being treated with alendronate and pravastatin. In 2004, she had undergone a splenectomy for splenic avulsion and had received pneumococcal, meningococcal, and *Haemophilus influenzae* vaccines postoperatively. Histopathological examination showed marginal-zone hyperplasia, which did not require further intervention. Her daughters reported that she had been bitten on the third digit of her left hand by her dog 2 days prior to presentation. In the emergency room, systemic inflammatory response syndrome (SIRS) criteria were met, with a fever of 41.1°C, tachypnea (40 breaths per minute), tachycardia (150 beats per minute), and leukopenia (3,100 cells/mm³). She was hypotensive (80/40 mm Hg), requiring volume resuscitation and vasopressors. Her left hand was dark purple. She was started on broad-spectrum antibiotics with vancomycin, doxycycline, and piperacillin-tazobactam and was admitted to the medical intensive care unit. Laboratory data showed evidence of end-organ dysfunction (serum lactate level, 8.3 mmol/liter; serum creatinine level, 1.41 mg/dl) and disseminated intravascular coagulation (low platelet count of 76,000/mm³, prolonged prothrombin time of 24.9 s with an international normalized ratio [INR] of 2.2, prolonged activated partial thromboplastin

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For answer and discussion, see page 1601 in this issue (<https://doi.org/10.1128/JCM.01867-15>).

time of 60.6 s, and low fibrinogen level of 178 mg/dl). Wright-Giemsa staining of a peripheral blood smear revealed round intraerythrocytic basophilic inclusions (Howell-Jolly bodies) as well as intracellular and extracellular organisms (Fig. 1A). Within 6 h of incubation, Gram-negative bacilli grew in both aerobic and anaerobic blood culture bottles (BD Bactec Fx; BD Diagnostic Systems, Sparks, MD) (Fig. 1B). The organism did not grow on Columbia-CNA agar with 5% sheep blood, chocolate agar, or MacConkey agar upon 48 h of incubation at 35°C in 5 to 10% CO₂, but tiny colonies could be observed on chocolate agar after 5 days of incubation at 35°C in 5 to 10% CO₂ (Fig. 1C). Matrix-assisted laser desorption ionization–time of flight mass spectrometry (MALDI-TOF MS) (Vitek MS; bioMérieux, Durham, NC) failed to identify the organism. Identification of the bacterium was therefore performed with partial 16S rRNA gene sequencing.