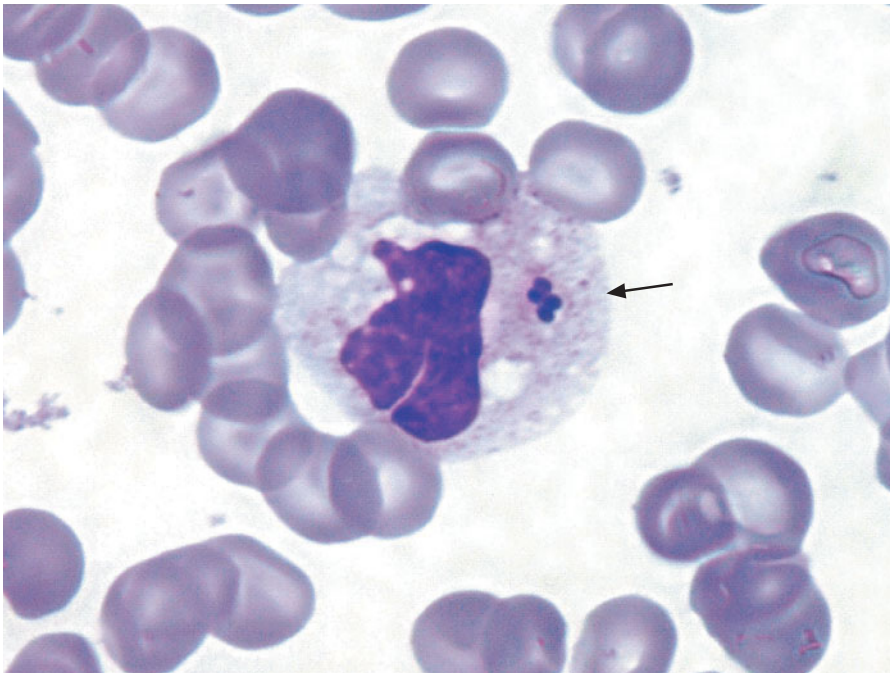


A 43-year-old man was admitted with a relapse of acute myelomonocytic leukemia eight months after having undergone autologous hematopoietic stem-cell transplantation. Fever (temperature, $>39^{\circ}\text{C}$) developed within one day of the initiation of salvage chemotherapy. Empirical treatment with meropenem was initiated, and amikacin, vancomycin, and amphotericin B were added on days 4, 6, and 8, respectively. On day 25, vancomycin was changed to teicoplanin. Although no microbial growth was observed in 19 blood cultures performed during the first 35 days, the patient's fever persisted. By day 35, hematologic recovery (neutrophil count, >1000 cells per cubic millimeter) was attained; 1- μm inclusions of round structures grouped in pairs in a pattern resembling that of a four-leaf clover (arrow) were observed within peripheral-blood neutrophils.

What is the likely diagnosis?

IMAGES IN CLINICAL MEDICINE

Coagulase-Negative Staphylococcus within Neutrophils in Acute Leukemia



A 43-YEAR-OLD MAN WAS ADMITTED WITH A RELAPSE OF ACUTE MYELOMONOCYTIC leukemia eight months after having undergone autologous hematopoietic stem-cell transplantation. Fever (temperature, $>39^{\circ}\text{C}$) developed within one day of the initiation of salvage chemotherapy. Empirical treatment with meropenem was initiated, and amikacin, vancomycin, and amphotericin B were added on days 4, 6, and 8, respectively. On day 25, vancomycin was changed to teicoplanin. Although no microbial growth was observed in 19 blood cultures performed during the first 35 days, the patient's fever persisted. By day 35, hematologic recovery (neutrophil count, >1000 cells per cubic millimeter) was attained; $1\text{-}\mu\text{m}$ inclusions of round structures grouped in pairs in a pattern resembling that of a four-leaf clover (arrow) were observed within peripheral-blood neutrophils. Methicillin-resistant coagulase-negative staphylococcus grew in blood cultures obtained from both a central venous catheter and a peripheral vein. Teicoplanin was changed to linezolid. By day 37, the fever had resolved. However, refractory multiorgan failure developed, and the patient died on day 49.

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