

Images in Infectious Diseases

Disseminated histoplasmosis diagnosed in a peripheral blood smear

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A 40-year-old man with human immunodeficiency virus (HIV) infection, diagnosed in 2008, and irregular use of antiretroviral therapy, was admitted to the emergency room with diarrhea, asthenia, fever, and weight loss of 4kg in the previous 10 days. His evacuations were watery, with no mucus or blood. He was emaciated, with an axillary temperature of 38.3°C. Cardiopulmonary auscultation findings were normal, and the abdomen was not tender, without visceromegaly. The skin showed generalized hypo- and hyperchromic spots. The patient was hospitalized, and laboratory tests were performed. The complete blood count showed anemia, leucopenia, and a normal platelet count; the serum level of C-reactive protein was 43mg/dL (reference: ≤ 0.5 mg/dL). The cluster of differentiation 4+ (CD4+) cell count was 6.0/mm³, and the viral load was undetectable. In the peripheral blood smear, neutrophils with multiple yeasts were observed, suggestive of *Histoplasma capsulatum* (Figure 1). He was treated with amphotericin B, which reached a cumulative dose of 840mg (in 40 days). He was discharged and prescribed itraconazole. After 3 months, he developed a disseminated cryptococcosis (treated with amphotericin B and fluconazole), and died 1 month later, following bacterial pneumonia with septic shock.

Yeasts can grow in the blood of patients with disseminated histoplasmosis, and in severe acute cases, yeasts can be detected inside white blood cells on a peripheral blood smear or buffy coat preparation^{1,2}. Detection of circulating *Histoplasma capsulatum* polysaccharide antigen in urine and serum is used for rapid diagnosis. The sensitivity of the urine assay is approximately 90% among patients who have acquired immunodeficiency syndrome (AIDS)^{1,3}.

Acknowledgments

We offer thanks to the Federal University of Triângulo Mineiro, who provided technical support for the development of this study.

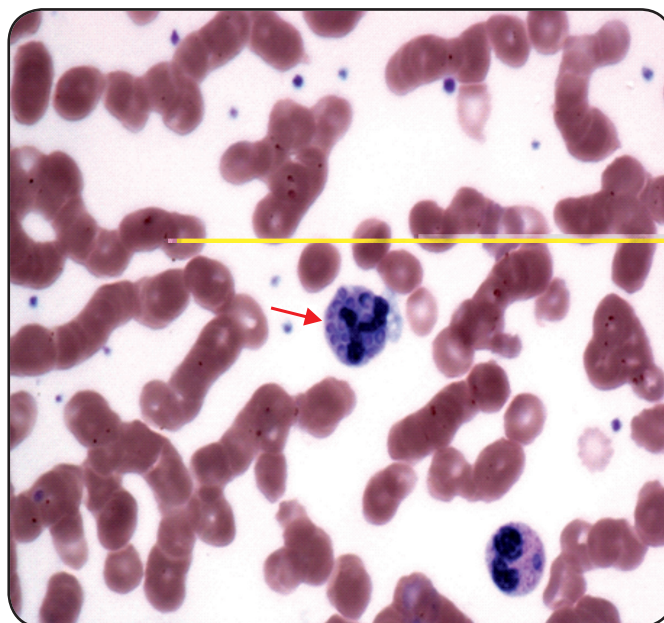


FIGURE 1 - Peripheral blood smear - multiple yeasts in neutrophil (arrow). 1,000x magnification – Giemsa staining).

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Received 2 June 2016

Accepted 8 July 2016