

## Leishmania no Sangue Periférico: Um Achado Raro e Incidental *Leishmania in Peripheral Blood: An Unusual and Incidental Find*

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**Palavras-chave:** Leishmania; Leishmaniose; Neutrófilos.

**Keywords:** *Leishmania*; *Leishmaniasis*; *Neutrophils*.

Leishmaniasis is an endemic disease in Portugal, affecting immunocompetent and immunosuppressed patients.<sup>1</sup> The gold standard of diagnosis is demonstration of parasites in stained tissues - bone marrow, spleen, lymph nodes, liver, and skin (cutaneous forms) - or in culture. We report a case of accidental discovery of *Leishmania* in peripheral blood of an immunocompromised patient with several comorbidities.

A 53-years-old man, Caucasian, homeless, with active inhaled drug addiction and a history of heart failure due to the abuse of substances, was admitted into the Department of Infectious Diseases from our Hospitalar Center with a productive cough, dyspnea and diarrhea. Physical examination showed: poor hygiene, emaciated, tachycardia, wheezing at pulmonary auscultation and oral candidiasis; without fever, palpable organomegaly, adenopathy or skin lesions.

Analytically: hemoglobin 99 g/L; white blood cells 4.73 x10<sup>9</sup>/L (neutrophils 76%, lymphocytes 21%); platelets 115

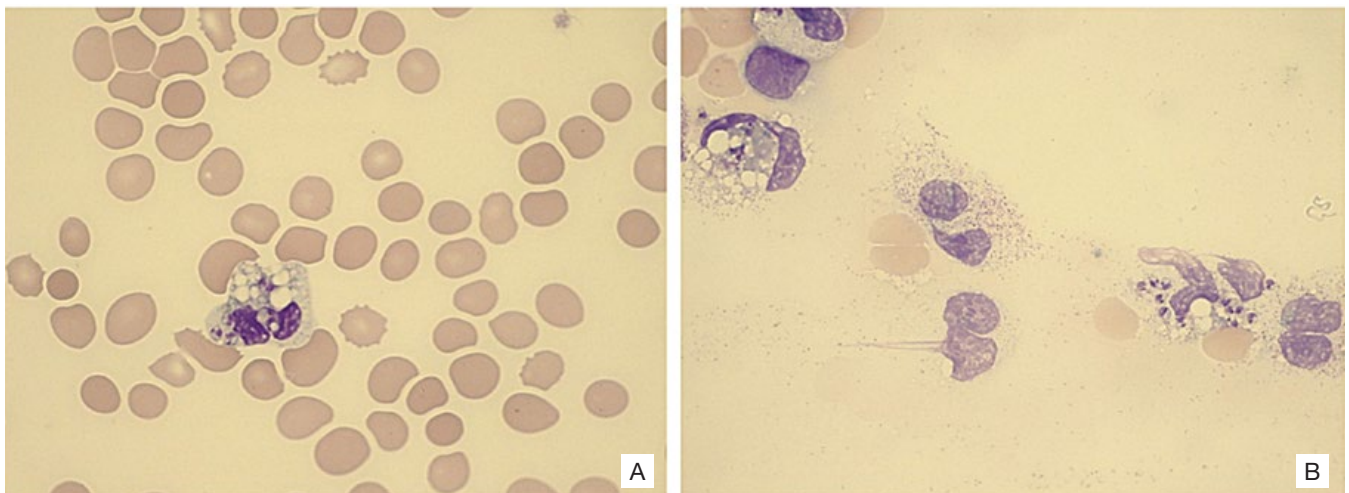
x10<sup>9</sup>/L; Dimer D- 3607 µg/L (RV: < 230); C-reactive protein 31.1 mg/L (RV< 5.0); urine examination positive for cannabinoids, cocaine metabolites and opiates. VIH1 positive: viral charge – 6140000.0 copies/mL, T Helper lymphocytes (CD4+) – 50.1 cells/ µL. Angio-CAT showed ground glass densification areas throughout the lung, suggesting the hypothesis of drug inhalation pneumonitis.

During hospitalization, he was diagnosed with: inaugural HIV/AIDS infection, *pneumocystis jiroveci* respiratory infection, colitis to *Clostridium difficile*. He was treated with trimethoprim, sulfamethoxazole, vancomycin, prednisolone and anti-retroviral therapy.

In a routine blood count order, and by observation of the peripheral blood smear, forms of amastigotes of *Leishmania* spp. were unexpectedly observed (Figs. 1 and 2).

His condition progressed unfavourably with acute hypertensive pulmonary edema, heart failure and progressive renal failure. The patient died on the 21<sup>st</sup> day of hospitalization.

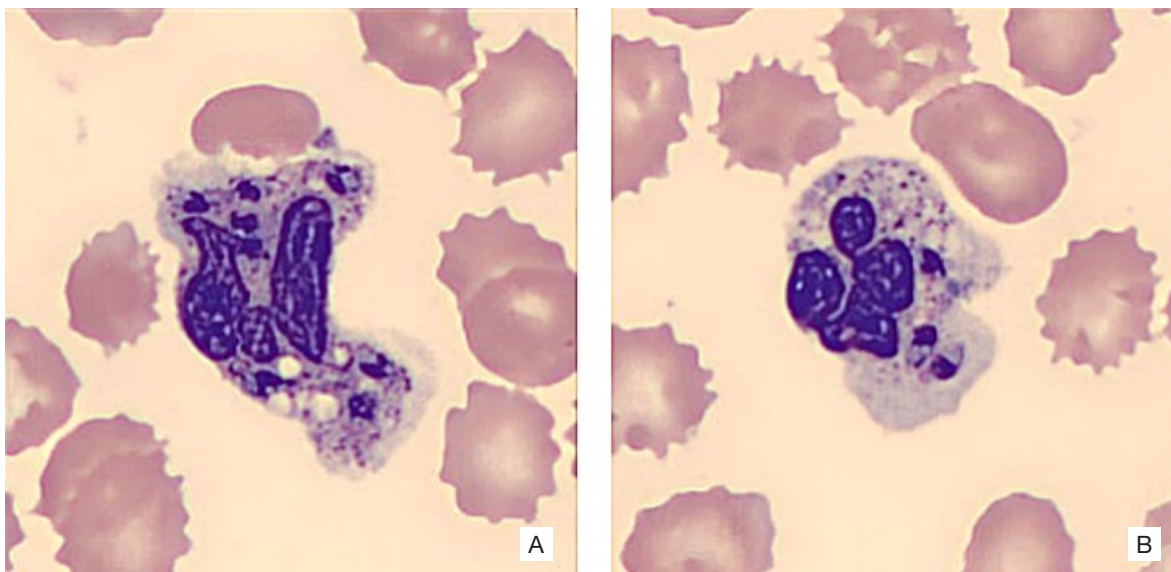
The appearance of *Leishmania* in peripheral blood is rare and is indicative of marked and prolonged immunodeficiency, in this case due to HIV infection. ■



**Figure 1:** Peripheral blood smears showing amastigotes of *Leishmania* spp. in the neutrophils (A) and near to destroyed cells (B). May-Grunwald-Giemsa staining, 1000x magnification.

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**Figure 2 A and B:** Detail of parasitized peripheral blood neutrophils. We can see the oval forms with a dark zone (nucleus) and kinetoplast of the parasites, highly suggestive of *Leishmania*.<sup>2</sup> Coloration: May- Grunwald Giemsa staining 1000x magnification plus zoom (CellaVision).

#### Declaração de Contribuição

LS – Pesquisa, redação e aprovação final do artigo.

AR – Redação e aprovação final do artigo.

ES – Aquisição de imagem, revisão e aprovação final do artigo.

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Todos os autores aprovaram a versão final a ser publicada.

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LS - Research, writing and final approval of the article.

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