Acute Diarrhea in a Patient with HIV Infection: *Cystoisospora belli*

Diarreia Aguda numa Doente com Infeção VIH: *Cystoisospora belli*

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A 36-year-old woman from Angola presented to the emergency department with diarrhea for the last five days, anorexia, abdominal discomfort, and myalgias. The patient had a known HIV-1 infection for more than ten years, without antiretroviral therapy after more than one year of missing medical follow-up (CD4 count of 94 cells/uL).

Upon physical examination, the patient was dehydrated and had mild discomfort at abdominal palpation. The blood workup revealed a serum creatinine of 5.3 mg/dL (no previous kidney disease was known) and normocytic normochromic anemia (hemoglobin 10.6 mg/dL).

Stool sample analysis revealed *Cystoisospora belli* oocysts (Fig. 1). The patient was started on trimethoprim/sulfamethoxazole 160/800 mg per day and IV fluids, with resolution of the diarrhea and kidney function improvement. Antiretroviral therapy was also started (bictegravir/emtricitabine/tenofovir alafenamide 50/200/25 mg). The dose of trimethoprim/sulfamethoxazole was increased to 160/800 mg twice daily after improvement in kidney function and was administered for fourteen days.

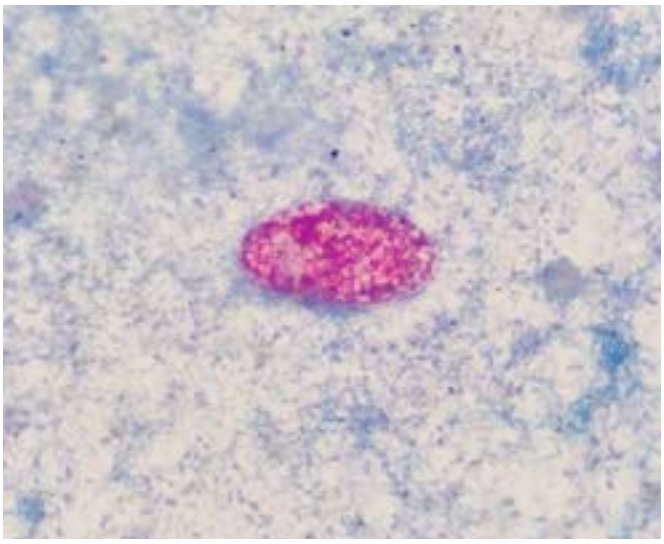

Figure 1: *Cystoisospora belli* oocyst on stool smear stained using the modified Ziehl-Neelsen method (original amplification x100).

Cystoisospora belli is an opportunistic protozoan that causes infection by ingesting contaminated water or food.[1-4] Symptoms can start years after the initial exposure, usually presenting as self-limited diarrhea and abdominal pain.[1-3] In

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immunocompromised patients it can evolve into chronicity and, if not treated, cause life-threatening persistent enteritis.[1,2,4]

This infection is endemic to Africa, Southeast Asia, and South America. However, elsewhere in the world, especially when assessing immunocompromised patients, a high level of suspicion must be present.[1,2]

Diagnosis is made by microscopic detection in stool.[4] Trimethoprim/sulfamethoxazole is usually the drug of choice, providing rapid clinical and parasitological cure.[4] Immunosuppressed patients can, however, relapse with clinical disease.[4]

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References

1. Neira OP, Barthel ME, Wilson LG, Muñoz SN. Infección por Isospora belli en pacientes con infección por VIH: presentación de dos casos y revisión de la literature. Rev Chilena Infectol. 2010;27:219-27. doi:10.4067/S0716-10182010000300007
2. Dubey JP, Almeria S. Cystoisospora belli infections in humans: the past 100 years. Parasitology. 2019;146:1490-527. doi:10.1017/S0031182019000957
3. Kanaujia R, Mewara A. Cystoisospora belli: A Cause of Chronic Diarrhea in Immunocompromised Patients. Am J Trop Med Hyg. 2023;108:1084-5. doi:10.4269/ajtmh.23-0012
4. Usluca S, Inceboz T, Unek T, Aksoy U. (2012) Isospora belli in a patient with liver transplantation. Turkiye Parazitol Derg. 2012;36:247-50. doi:10.5152/tpd.2012.58