

IMAGES IN GASTROENTEROLOGY AND HEPATOLOGY

***Strongyloides stercoralis* and HTLV-1 infection in a patient with adult T-cell leukemia/lymphoma**

Infecção por *Strongyloides stercoralis* e HTLV-1 em doente com Leucemia/Linfoma de células T do adulto

Miriam Magalhães^{a,*}, Marta Gôja^a, Amália Pereira^b

^a Interno de formação específica de Medicina Interna, Serviço de Medicina 1, Hospital de Santo André E.P.E. Leiria, Portugal

^b Assistente graduado de Medicina Interna, Serviço de Medicina 1, Hospital de Santo André E.P.E. Leiria, Portugal

Received 28 May 2011; accepted 9 October 2011

Available online 15 July 2012

A 41-year-old male patient from Guinea-Bissau was admitted in our hospital with anorexia, abdominal discomfort and weight loss (15% of total weight) in the previous month. He was a medical doctor living in Portugal for the last twenty years and had not been to Africa since the previous ten years. He then developed massive watery diarrhea and persistent vomiting. The physical examination revealed no abnormalities. Blood analysis showed leukocytosis without eosinophilia or elevation of C-reactive protein. Upper gastrointestinal endoscopy identified diffuse edema and erythema of duodenal folds (Fig. 1). The colonoscopy showed moderately diffuse colitis with profuse multiple small ulcers surrounded by inflammatory halo and scattered along the entire colon (Fig. 2). Adult *Strongyloides stercoralis* larvae were seen with the microscope from samples obtained from both upper and lower gastrointestinal tract (Fig. 3). Considering these results, we suspected of an immunocompromising disease. Further study revealed a blood immunophenotyping with abnormal T cell population with increased CD3+ and CD4+ consistent with an adult T-cell leukemia/lymphoma (ATLL). Serology for human T-cell lymphotropic virus type-1 (HTLV-1) was positive. Therapy

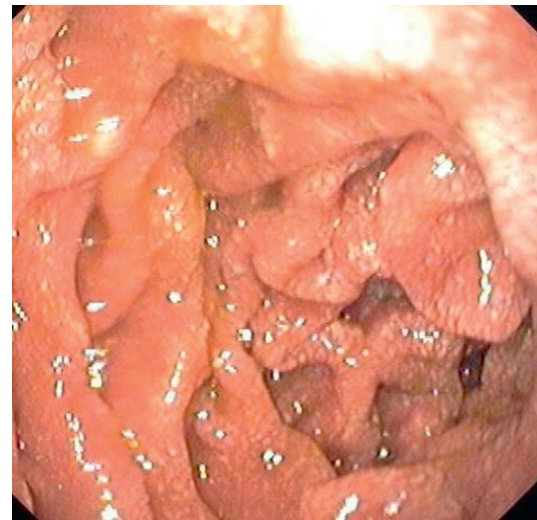


Figure 1 Edema and erythema of duodenal folds.

with albendazole was started as well as chemotherapy with favorable response.

S. stercoralis infection is common in endemic areas although patients remain asymptomatic in half of the cases.¹

* Corresponding author.

E-mail address: miriambb78@yahoo.com (M. Magalhães).

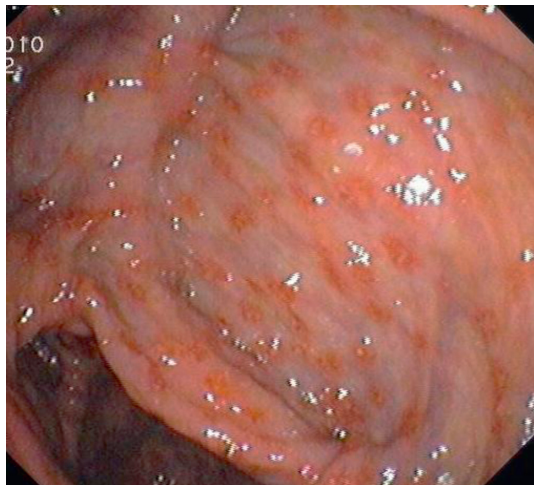


Figure 2 Flat multiple small ulcers distributed along the entire colon.

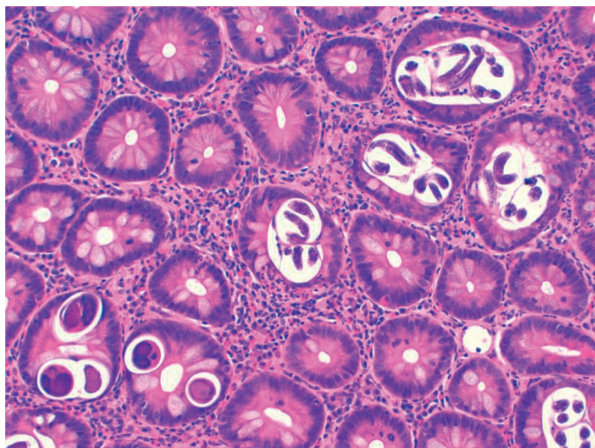


Figure 3 Adult nematode larvae seen in duodenal biopsy.

Hyperinfection, which is life-threatening, can develop in immunocompromised patients and typically affects the gastrointestinal tract.² Endoscopic findings may vary considerably but diagnosis can be made in 90% of cases by duodenal or jejunal biopsies.²

Recommended treatment consists of Ivermectin or Albendazole/Tialbendazole as valid alternatives.¹

Co-infection of *S. stercoralis* with HTLV-1 has been described and there are evidences that HTLV-1 is a cofactor of development of ATLL in adults.³ HTLV-1 is a provirus acquired early in life that disrupts the immune response. This mechanism is not known.⁴ Unfortunately ATLL carries a poor prognosis despite direct therapy.

Conflicts of interest

The authors have no conflicts of interest to declare.

References

1. Segarra-Newnham M. Manifestations, diagnosis and treatment of *Strongyloides stercoralis* infection. *The Annals of Pharmacotherapy*. 2007;41:1992–2001.
2. Mittal S, Sagi S, Hawari R. Strongyloidiasis: endoscopic diagnosis. *Clinical Gastroenterology and Hepatology*. 2009;7:e8.
3. Grijzen M, Van den Berk G, Hoekstra E, Terpstra W, Veldman S, Jansen J. Intestinal strongyloidiasis in HTLV-1 associated ATLL. *Endoscopy*. 2009;41:E271–2.
4. Iriemenam N, Sanyaolu A, Oyibo W, Fagbenro-Beyioku A. *Strongyloides stercoralis* and the immune response. *Parasitology International*. 2010;59:9–14.