PICTURES IN DIGESTIVE PATHOLOGY

Colitis by *Cryptosporidium* as initial manifestation of acquired immunodeficiency syndrome

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A previously healthy 39-year-old man was attended in our hospital because of asthenia, weight loss, watery diarrhea, and relapsing fever for the past 2 months. Physical examination was normal. Hematology and coagulation tests, as well as serum biochemical parameters, were all normal. Blood cultures were negative, but the examination of a stool sample smear using the Ziehl-Neelsen method revealed *Cryptosporidium* oocysts (Fig. 1), which was confirmed by a direct immunofluorescence technique using a monoclonal antibody against specific *Cryptosporidium* antigens (Fig. 2). A serological examination detected antibodies to human immunodeficiency virus (HIV). Peripheral blood lymphocyte subset counts was: CD4⁺: 126/mm³, CD8⁺: 576/mm³, and CD4⁺/CD8⁺: 0.2. Colonoscopy showed a diffusely hyperemic mucosa mostly in the ascending and transverse colon. A colonic biopsy demonstrated a marked congestion of the lamina propria along with a lymphoplasmocytic inflammatory infiltrate (Fig. 3). Interestingly, *Cryptosporidium* oocysts were reported on the surface of colonic mucosal cells (Fig. 4).

Cryptosporidium spp. is an intestinal protozoan parasite belonging to the *Sporozoea* (Phylum *Apicomplexa*) class and the *Coccidia* subclass. *Cryptosporidium* is transmitted via the fecal-oral route, and is passed in the feces in the form of 4-6- μ m oocysts containing four sporozoites. In recent years *Cryptosporidium* has been recognized as a significant cause of diarrhea in both immunocompetent and immunocompromised humans, particularly in patients infected by HIV (1). In HIV⁺ patients with diarrhea *Cryptosporidium* infection rates of about 4-6% have been reported, these being higher in patients with a CD4⁺ count lower than 200/mm³ (2,3). Although considered a complication associated with advanced stages of immunosuppression, colitis by *Cryptosporidium* may also be the initial manifestation in patients infected by HIV (4,5).

Fig. 1.- *Cryptosporidium* oocysts in a stool sample detected by the Ziehl-Neelsen method.

Tinción de Ziehl-Neelsen de una muestra de heces que pone de manifiesto la presencia de ooquistes de *Cryptosporidium*.

Fig. 2.- Direct immunofluorescence staining of a stool sample showing positivity for *Cryptosporidium* antigens.

Tinción por inmunofluorescencia directa de una muestra de heces en la que se observa fluorescencia positiva para antígenos específicos de *Cryptosporidium*.

Fig. 3.- A colon biopsy showing a marked congestion of the lamina propria along with a lymphoplasmocytic inflammatory infiltrate.
Biopsia de colon en la que se observa una marcada congestión de la lamina propia con un infiltrado inflamatorio linfoplasmocitario.

Fig. 4.- *Cryptosporidium* oocysts (arrow) on the surface of colonic mucosal cells.
Ooquistes de Cryptosporidium (flecha) adheridos a las células caliciformes del colon.

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