

## Immunostaining of Cryptosporidiosis with Human Immunodeficiency Virus Infection

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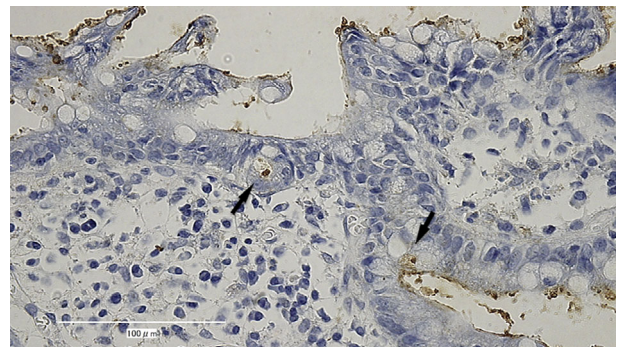
**Key words:** cryptosporidium, immunostaining, human immunodeficiency virus

(Intern Med 55: 3229-3230, 2016)

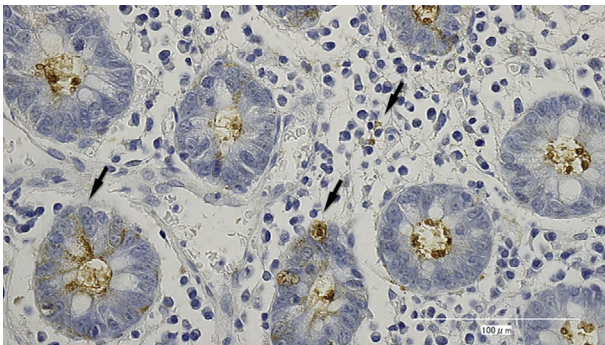
(DOI: 10.2169/internalmedicine.55.7246)



**Picture 1.**



**Picture 2.**



**Picture 3.**

A 33-year-old man with human immunodeficiency virus (HIV) infection was referred to our hospital because of profuse diarrhea and weight loss (Body mass index 14.5). The HIV-RNA and CD4 counts were 640,000 copies/mL and 22/ $\mu$ L, respectively. Hematoxylin and Eosin stained colonic biopsy specimens showed *Cryptosporidium* oocysts attached to the epithelial cells (Picture 1). On immunostained tissue specimens with anti-*Cryptosporidium* antibodies, parasites

were found to be penetrating the mucosal epithelium and they were also observed in the lamina propria (Picture 2, 3). Notably, the parasites were more abundant right under the damaged mucosal surface (Picture 3). His diarrhea improved 2 weeks after the initiation of antiretroviral therapy. These findings may indicate that HIV-associated mucosal immune dysfunction can sometimes lead to the onset of invasive cryptosporidiosis (1). Although immunological diagnostic stool tests are well documented (2), histological examinations in such cases are rarely performed. Immunostaining may therefore be a powerful tool to elucidate the mechanisms by which *Cryptosporidium* cause life-threatening diarrhea in HIV-infected patients.

**The authors state that they have no Conflict of Interest (COI).**

### References

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Received for publication February 8, 2016; Accepted for publication February 9, 2016

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