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THE BRIEF CASE

Closing The Brief Case: A Rare Case of Invasive Amebiasis Requiring Emergency Subtotal Colectomy in an HIV-Positive Man

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SELF-ASSESSMENT QUESTIONS

1. Which of the following is a proven risk factor for invasive amebiasis?
   A. Being female
   B. HIV infection
   C. Inflammatory bowel disease
   D. Prolonged antibiotic use
   E. Travel to or residence in an area of endemicity

   Answer: E. The predominant risk factors for amebiasis include travel to or residence in areas of endemicity, being poor, being a man who has sex with men (MSM), being institutionalized, pregnancy, immunosuppression (including corticosteroids), alcoholism, malignancy, and malnutrition. Being male is associated with a higher risk of amebic liver abscess but not amebic dysentery. An association between MSM status and amebiasis is likely to relate to potential feco-oral exposure during sexual contact. Attempts to associate HIV and amebiasis have been confounded by high proportions of MSM within HIV populations. There is no known association between invasive amebiasis and prolonged antibiotic use or inflammatory bowel disease, apart from associated therapy with systemic or rectal steroids.

2. What is the most commonly used serological assay in the diagnosis of amebiasis?
   A. Complement fixation
   B. ELISA (enzyme-linked immunosorbent assay)
   C. IFA (indirect fluorescent assay)
   D. Immunochromatographic lateral-flow assay
   E. Latex agglutination

   Answer: B. ELISA is the most common assay used in diagnostic laboratories, as it is easily reproducible. It can be useful in the diagnosis of intestinal and extraintestinal amebic infections when amebiasis is suspected. IFA has the added

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advantage over ELISA in being able to distinguish between previous and current infections, and IFA IgM levels can be used to monitor the effect of treatment of invasive amebiasis. IFA is reported to have a sensitivity of 93.6% and a specificity of 96.7%, which is reported as being better than those of ELISA. IFA is more technically challenging to perform and usually performed in more specialized laboratories.

3. Which of the following is an appropriate treatment regimen for invasive amebiasis?

   A. Ceftriaxone and metronidazole
   B. Metronidazole or tinidazole
   C. Paromomycin or diloxanide furoate
   D. Metronidazole or tinidazole and paromomycin or diloxanide furoate
   E. Co-trimoxazole

   Answer: D. The aims of treatment of amebiasis are to eliminate invasive trophozoites (using either metronidazole or tinidazole) and to eradicate carriage of *E. histolytica* cysts in the intestine (using a luminal agent such as paromomycin or diloxanide furoate). Treating trophozoites and not cysts or vice versa would not be adequate. There is no routine need for antibacterial agents in the treatment of invasive amebiasis unless there are other indications, such as colonic perforation, as in the reported case. Co-trimoxazole can be used in diarrheal disease caused by *Cyclospora cayetanensis* or *Cystoisospora belli* but is not indicated for invasive amebiasis.

TAKE-HOME POINTS

- Consider amebiasis in the differential diagnosis of patients presenting with diarrhea who have traveled to an area of endemicity, even when exposure time is limited.
- Serological tests for amebiasis include ELISA and IFA, with ELISA being more commonly used but IFA having greater sensitivity and specificity and the advantages of being able to support differentiation of previous versus current amebiasis and to monitor response to treatment.
- Treatment of amebiasis requires elimination of invasive trophozoites with metronidazole and tinidazole, followed by eradication of luminal cysts with paromomycin or diloxanide furoate.
- MSM are at risk from invasive amebiasis, and attempts to associate HIV and amebiasis have been confounded by high proportions of MSM within HIV populations.