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Unusual microscopic finding in a hepatic abscess content



Hallazgo microscópico inusual en muestra de absceso hepático

Among all parasitic diseases, amoebiasis is the third most frequent cause of mortality in the developing world, with more than 100,000 deaths reported annually.¹ In developed countries, mostly immigrants, travelers from endemic areas and men who have sex with men (MSM) are affected.^{1,2}

Entamoeba histolytica is the only invasive among *Entamoeba* group and has two parasitic forms: cyst and trophozoite stages. Transmission occurs after ingestion of cysts from contaminated food or water or after person-to-person contact (oral-anal sex).^{1–3} Once cysts reach the small intestine, they become trophozoites, the invasive form.^{1,4}

Extraintestinal disease (10%) is represented by the amoebic liver abscess (ALA). A delay in the correct diagnosis may evolve into rupture of the abscess, with high mortality associated.⁵ Diagnosis of ALA is mainly serologic, with more than 90% of cases testing positive. Image techniques and direct microscopic visualization, help to make the definitive diagnosis.^{1,2,6} Visualization of cysts in the abscesses content may occur but is an extraordinary unlikely finding, as the invasive form that reaches the liver is the trophozoite.^{1,2,7}

We here report a case of a 31-year-old transgender woman who was admitted to the ICU presenting with abdominal sepsis secondary to a liver abscess. She referred a frequent habit of alcohol consumption and to be a sex worker, as well as no travels to tropical areas since she arrived in Spain in 2016 from Colombia, her country of origin.

Scan findings showed a 14 cm diameter cyst occupying a great part of the right liver lobe. Hematological and biochemical profiles were: Hb 10.0 g/dL, Ht 29.2%, CRP 32.77 mg/dL, leukocytosis (25,000/μL), GOT 210 U/L, GPT 182 U/L.

The following day, an echo-guided drainage was performed, obtaining 450 cc. Samples were sent to the Microbiology department including serum samples. Empirical antimicrobial therapy was initiated with ceftriaxone 2 g/12 h and metronidazole 750 mg/8 h.

Direct observation of the abscess content showed cysts of *E. histolytica/dispar* (Fig. 1), followed by confirmation of the species by immunochromatography (TECHLAB® *E. HISTOLYTICA* QUIK CHEK™). Antimicrobial therapy was then readjusted to metronidazole at same dosage plus paromomycin for 10 days.

We have available two different serological tests for the detection of *E. histolytica* IgG antibodies: one Latex-agglutination technique (BICRO-LATEX AMIBE FUMOUZE®) and an ELISA assay (SCIMEDX®). The ELISA usually follows a positive agglutination test. In our patient, the latex-agglutination test was positive, but the ELISA assay tested negative. Therefore, a second serum sample was sent 7 days later which tested positive for both tests, indicating seroconversion. Stool samples resulted negative for microscopy examination. Screening for HIV and Hepatitis virus was performed on serum samples, resulting negative for both tests.

At day 5 the patient was discharged from the ICU. Paromomycin was administered for 5 more days once metronidazole was finished. At day 21, discharge from hospital was decided.

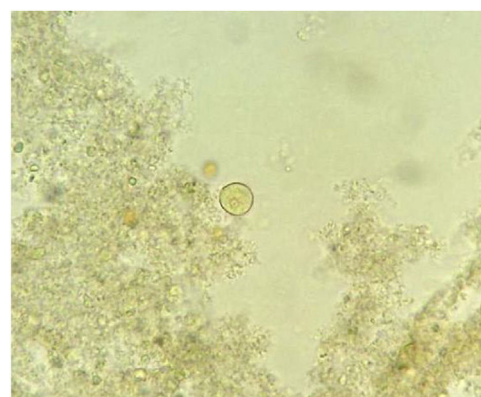


Fig. 1. Cyst of *Entamoeba histolytica*.

Discussion

E. histolytica is a protozoan worldwide distributed.² In developed countries, institutionalized patients and MSM have a higher risk to become infected.^{1,2,4} Our patient was a transgender woman who practiced prostitution as a profession. This could be one explanation for the acquisition route. Her consumption of alcohol through a long period of time could also have influenced the ALA formation.⁵

In non-endemic areas, it is estimated that approximately 50% of patients with symptomatic ALA are misdiagnosed.⁸ Since patients present with very unspecific symptoms, a good screening diagnosis is determinant for a correct and prompt treatment approach.

Analysis of stool samples is not reliable in extraintestinal disease, as only 15–33% of them are positive.^{2,8} Instead, serology shows up as a reliable marker in the extraintestinal disease, as sensitivity and specificity of ELISA has been reported to range between 80 and 100%.^{1–3,5} In the case of our patient, as the serum sample at day 1 was negative the possibility of a false negative result in the first ELISA determination was also considered, therefore, once we had a second sample 7 days later, parallel ELISA determinations were performed, confirming the first negative result and the seroconversion during hospital stay. According to this, it is unknown whether primoinfection occurred in our environment not long ago or in contrast primoinfection occurred years ago in Colombia and the patient stayed colonized until extraintestinal invasion of the parasite occurred. Although in Spain most cases are imported, community acquisition of amoebiasis has also been reported.⁹

Microscopic examination of the abscess content is a very low sensitive technique. The trophozoites are located in the wall of the abscess, therefore they can only be seen when this area is aspirated, although this happens in less than 20% of samples.^{7,8,10} In our case, when the fluid arrived in our department, its aspect recalled the typical “anchovy paste” appearance. What is outstanding in this case is that no trophozoites, but cysts were observed under the microscope.

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Emergence of multidrug-resistant *Haemophilus parainfluenzae* in genital specimens: Importance of culture and antimicrobial susceptibility surveillance



Emergencia de *Haemophilus parainfluenzae* multiresistente en muestras genitales: importancia del cultivo y vigilancia de sensibilidad antimicrobiana

Dear Editor:

Haemophilus parainfluenzae is a Gram-negative coccobacillus of the microbiota of the upper respiratory tract. Evidence has recently been found of its role as a pathogen causing non-gonococcal urethritis (NGU), although the pathogenicity is difficult to assess, as it can also be isolated in asymptomatic patients or along with other pathogens.^{1,2} The emergence of multidrug resistant (MDR) strains of *H. parainfluenzae* has recently been documented in different countries in Europe.^{3–6} As the empirical treatment for urethritis is a third-generation cephalosporin with or without a macrolide, these drugs would not be effective against MDR *H. parainfluenzae*.

We present the isolates of *H. parainfluenzae* obtained from genital samples analysed at Hospital Universitario de Navarra from 2016 to March 2022.

The isolates were identified using MALDI-TOF (Bruker Daltonik, Germany) and the antibiogram was performed using the disc-plate method on *Haemophilus* Test Medium agar (Becton Dickinson, United States) with 24 h incubation at 37°C in an atmosphere with 5% of CO₂, studying the sensitivity to ampicillin, amoxicillin/clavulanic acid, cefuroxime, cefotaxime, nalidixic acid, ciprofloxacin and cotrimoxazole. We followed the cut-off points established by EUCAST in 2021.⁷ Beta-lactamase activity was studied using a nitrocefin disc (cefinaise, BD, USA) and/or molecular detection of TEM/ROB enzymes. An MDR strain was defined as resistant to three or more classes of antibiotics.⁸

During the study period, 443 isolates of *H. parainfluenzae* were obtained from genital samples, with or without clinical significance. The mean age of the patients was 34 years (SD: 13 years), and 345 (77.8%) were male.

In the susceptibility study, 13 (2.2%) MDR strains were identified, all in males with a mean age of 32 (SD: 5 years). Table 1 shows how MDR *H. parainfluenzae* has evolved in Navarra.

We found a significant increase in resistance, from not isolating any resistant strains to having 18% MDR strains in seven years. All MDR *H. parainfluenzae* strains were resistant to ampicillin, amoxicillin/clavulanic acid and cefuroxime. One strain also showed resistance to quinolones, five strains to cotrimoxazole, and five