

## Locally acquired infection with *Entamoeba histolytica* in men who have sex with men in Australia

Damien J Stark, Rashmi Fotedar, John T Ellis and John L Harkness

**TO THE EDITOR:** We report three cases of locally acquired *Entamoeba histolytica* infection in men who have sex with men (MSM) in Sydney, New South Wales.

*E. histolytica* is an invasive pathogenic amoeba that can cause invasive intestinal and extraintestinal amoebiasis. *Entamoeba dispar* is morphologically identical but is considered non-pathogenic and non-invasive.<sup>1</sup>

The three patients presented with a 1–3-week history of diarrhoea and abdominal pain. Routine bacterial cultures were negative for pathogens. Ova, cyst and parasite investigations showed cysts and trophozoites of *E. histolytica/dispar* complex in permanently stained, fixed faecal smears. Stool samples were tested for *E. histolytica* and *E. dispar* by polymerase chain reaction (PCR), using a previously described method.<sup>2</sup> All three patients were positive for *E. histolytica* by PCR; sequencing of the amplicons verified the presence of *E. histolytica* DNA.

The three patients presented within a 12-month period in 2005–2006. All were homosexually active men (ages, 31–53 years) who lived in inner Sydney. None had a history of overseas travel within the previous 5 years, suggesting that the infections were locally acquired.

High rates of intestinal parasitism are found in MSM throughout the world. Oral-anal and oral-genital sexual practices are reported to predispose to infection with enteric pathogens, particularly protozoa. A study reported a higher prevalence (37%) of *E. histolytica/dispar* complex in a homosexual population in Sydney when compared to non-MSM.<sup>3</sup> However, that study did not differentiate between the two species *E. histolytica* and *E. dispar*.

Amoebiasis has become endemic in MSM in Japan and causes significant morbidity and mortality; complications such as colitis and liver abscesses occur more frequently in homosexual and bisexual men than in heterosexual men.<sup>4</sup> Similar findings on amoebiasis are reported from Taiwan, with MSM at increased risk for invasive amoebiasis and intestinal colonisation with *E. histolytica*.<sup>5</sup>

The discovery of *E. histolytica* infection in MSM in Australia is of public health concern and highlights the importance of continued surveillance, as the organism has the potential to become endemic in the gay population and to cause significant morbidity. Clinicians should also be aware that *E. histolytica* is present in urban settings in Australia and should be included in differential diagnoses.

Damien J Stark, Senior Hospital Scientist<sup>1</sup>

Rashmi Fotedar, Research Assistant<sup>1</sup>

John T Ellis, Senior Lecturer<sup>2</sup>

John L Harkness, Department Head<sup>1</sup>

<sup>1</sup> Microbiology Department, St Vincent's Hospital, Sydney, NSW.

<sup>2</sup> Department of Medical and Molecular Biosciences, University of Technology Sydney, Sydney, NSW.

dstark@stvincents.com.au

1 Petri WA Jr, Haque R, Lyerly D, Vines RR. Estimating the impact of amoebiasis on health. *Parasitol Today* 2000; 16: 320–321.

2 Troll H, Marti H, Weiss N. Simple differential detection of *Entamoeba histolytica* and *Entamoeba dispar* in fresh stool specimens by sodium acetate-acetic acid-formalin concentration and PCR. *J Clin Microbiol* 1997; 35: 1701–1705.

3 Law CL, Walker J, Qassim MH. Factors associated with the detection of *Entamoeba histolytica* in homosexual men. *Int J STD AIDS* 1991; 2: 346–350.

4 Ohnishi K, Kato Y, Imamura A, et al. Present characteristics of symptomatic *Entamoeba histolytica* infection in the big cities of Japan. *Epidemiol Infect* 2004; 132: 57–60.

5 Hung CC, Deng HY, Hsiao WH, et al. Invasive amebiasis as an emerging parasitic disease in patients with human immunodeficiency virus type 1 infection in Taiwan. *Arch Intern Med* 2005; 165: 409–415. □