Scrotal abscess, a rare case of extra intestinal amoebiasis

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Abstract. The majority of amoeba infection are asymptomatic, but clinically intestinal amoebiasis or extra intestinal amoebiasis may result. Genital amoebiasis is very rare manifestation of extra intestinal amoebiasis, but a case of amoebic scrotal abscess, seen in Surabaya. The invasive form of *Entamoeba histolytica* trophozoite was seen in Giemsa stained aspirate of the abscess. In case of an abscess bacteria are primarily considered, but the case presented here shows that amoeba can be the cause, although very rarely. Thus when bacteriological diagnostics are negative amoeba should be considered, especially in case of brown-reddish colored and foul smelling pus.

Amoebiasis is caused by the protozoan parasite *Entamoeba histolytica* (Neva & Brown, 1994; Markell *et al.*, 1999). Amoebiasis is usually ingested via food or water contaminated with feces containing amoebic cyst (fecal-oral route), but cyst can also be ingested indirectly through contact with dirty hands or objects as well as by anal-oral contact. The prevalence of amoebic infection, as of most enteric disease is associated with lack of hygiene and poverty in human society and is generally higher in the tropics and subtropics than in temperate climate. The majority of amoebiasis (about 90%) are asymptomatic infections. In severe amoebiasis, known as invasive amoebiasis, *E. histolytica* trophozoites invade the intestinal wall, causing mucus secretion into the intestine and diarrhea-a disease called amoebic dysentery or amoebic colitis. Under circumstances the diarrhea becomes watery and bloody. The other symptoms may include abdominal cramp and pain, and fever. The *E.histolytica* trophozoites can cause ulcers in the intestines resulting in amoebic dysentery. Although rarely, in a chronic form of intestinal amoebiasis, ulcers may form in the intestinal wall, the amoeba may gain acces to the blood stream via the ulcers (hematogenous spread) or directly travel to other extra intestinal organs to form abscesses. The most common form of extraintestinal amoebiasis is hepatic amoebiasis (liver amoebic abscess). Amoebic abscess of the genetalia is a very rare extra intestinal manifestation. (CDC, 1999; Goldsmith, 1999; Weissman & Salata, 2000).

A case of amoebic scrotal abscess in a 58 years man who lived in Surabaya-Indonesia was seen in June 2014. He walked with legs wide a part and clear pain, and told to have fever and swelling of his scrotum since seven days. His body temperature was 39°C, blood pressure 130/80 mmHg. My diagnosis was scrotal abscess and I did a puncture of the abscess. Pus was obtained with a brown-reddish and mal odor. The standard bacteriological diagnostics, gram stain and cultur, yielded no result. The color and odor of the pus in combination with the negative-bacteriological result, raised the suspicion of *E.histolytica* as the cause of the scrotal abscess. After staining
with Giemsa the invasive form of *E. histolytica* trophozoites was detected in the aspirate (Figure 1). A pathogenic amoeba, *E. histolytica*, by light microscopy is indistinguishable in its trophozoite stage from those of non-pathogenic *E. moshkovskii* and *E. dispar* (Khainar & Parija, 2007; Fotedar et al., 2007). However, when amoeba have vacuoles containing digested erythrocytes, this indicates haemophagous (blood eating) activity, a sign of pathogenic capability (WHO, 2003). Detection of trophozoites containing digested erythrocytes is diagnostic for amoebiasis (Garcia & Ash, 1987; CDC, 1999; WHO, 2003).

Prasetyo & Mulyastuti (2005) have reported a case of amoebic abscess of labia majora in Surabaya. They suspected amoeba as the cause of the abscess because the color and odor of the pus. After staining with Giemsa amoeba was detected in the aspirate. Initially, this case was suspected to be caused by gonococci. Bacteriological diagnostics remained negative.

Bacteriological diagnostics remain to be done first in case of abscesses of genetalia. When no bacterial cause is found, amoeba should be considered, especially in case of brown-reddish colored and foul smelling pus.

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**Figure 1.** Invasive form *Entamoeba histolytica* trophozoite in aspirate of scrotal abscess. Giemsa stain and examined under oil emersion (100 x) objective. The entamoeba is seen as protozoan with transparent ectoplasma (arrow), the nucleus not visible, but vacuoles in endoplasm containing digested erythrocytes.
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