

## Amoebiasis

### Definition of causal agent

*Entamoeba histolytica*, a protozoan of 20-60mm diameter

### 1. Transmission of infection

#### 1.1 Exposure

Infection with cysts of *E. histolytica* is acquired through ingestion of contaminated water or food or by cross-contamination with infected material or body parts such as unwashed hands. Motile trophozoites are released from cysts and, in most cases, remain as harmless commensals in the large bowel.

#### 1.2 Occupational Groups at risk

The disease is endemic in Southern Europe but, mainly due to climate changes, it is now also found in Central and Northern Europe. In Europe, the main occupational groups at risk are those who travel for their work to endemic areas, especially agricultural areas, and sewage workers. Other groups at risk are fish breeders, health care workers, inmates of institutions and those who care for them.

### 2. Clinical Disease

#### 2.1 Clinical features

The most common outcome of amoebic infection is asymptomatic passage *per rectum* of cysts. Symptomatic amoebic colitis appears 2-6 weeks after infection and is manifest by the gradual development of lower abdominal pain and diarrhoea, followed by malaise, weight loss, and diffuse lower abdominal or back pain. The earliest signs of intestinal infection are micro-ulcerations of the large bowel mucosa.

Caecal involvement may mimic acute appendicitis. Fulminant intestinal infections, with severe abdominal pain, high fever, and diarrhoea can occur. In some cases, megacolon may develop due to severe bowel dilatation with intramural air. Uncommonly, patients can develop a chronic form of amoebic colitis.

Extra-intestinal infection involves the liver, with the development of one or more amoebic liver abscesses. Pleuro-pulmonary involvement is seen in 20 to 30% of patients.

#### 2.2 Diagnosis

Proctoscopy reveals ulcers with heaped up margins and normal intervening mucosa. Rarely, mass lesions ('amoebomas') can be seen. The diagnosis is confirmed by the microscopic finding of characteristic ematophagous trophozoites or cysts in stool specimens or material collected by rectal biopsy or ulcer aspirate. Culture of amoebas is more sensitive, but not routinely available. Kits for the performance of counterimmunodiffusion assays, agar gel diffusion assays and ELISA's are commercially available. Other appropriate investigations depend on which organs are believed to be involved

#### **Exposure criteria:**

*Minimum intensity and duration of exposure:* not applicable

*Maximum latent period:* six weeks.