

Caecal amoebiasis mimicking colon neoplasm with secondary hepatic involvement

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Abstract. A 29-year-old female started to be investigated for multiple liver lesions suspected of metastases. The only one finding in colonoscopy was an ulcer in the caecum. Initial macroscopic diagnosis made at endoscopy was incorrect, taking into consideration possible colonic malignancy. Histology surprisingly revealed *Entamoeba histolytica* infection. Liver biopsy did not prove either amoebic abscess or metastasis but oral-contraceptive-related focal nodular hyperplasia of liver. Treatment of amoebiasis with metronidazole was successful.

Key words: intestinal amoebiasis, amoeboma, *Entamoeba histolytica*, endoscopy, focal nodular hyperplasia of liver

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Souhrn. Popsán případ 29-leté pacientky, u které bylo zahájeno vyšetřování pro mnohočetné ložiskové postižení jater, imponující jako metastázy. Při koloskopii byla jediným nálezem solitární ulcerace v céku. Prvotní makroskopické hodnocení endoskopického nálezu bylo nepřesné, zvažovalo neoplázií tračníku. Histologie bioptických vzorků překvapivě odhalila infekci *Entamoeba histolytica*. Jaterní biopsie neprokázala ani amebový jaterní absces, ani metastázu, ale fokální nodulární hyperplázii (při dlouhodobé léčbě perorálními kontraceptivy). Léčba amebiázy metronidazolem byla úspěšná.

Klíčová slova: intestinální amebiáza, amebom, *Entamoeba histolytica*, endoskopie, fokální nodulární hyperplázie jater

Intestinal amoebiasis is caused by the protozoan *Entamoeba histolytica*. Worldwide, approximately 40 to 50 million people develop colitis or extraintestinal disease annually with 40,000 deaths (9). Most infection is asymptomatic, but amoebic dysentery, amoebic

liver abscess, and rarely other manifestations such as pulmonary, cardiac or brain involvement can occur (5). Localized intestinal infection resulting in a mass of granulation tissue forming an amoeboma is another uncommon presentation, which can mimic colon can-

Figure 1
Abdominal ultrasound. Two hypoechoic lesions (asterisks) in the right liver lobe. Mild patchy steatosis of the liver.

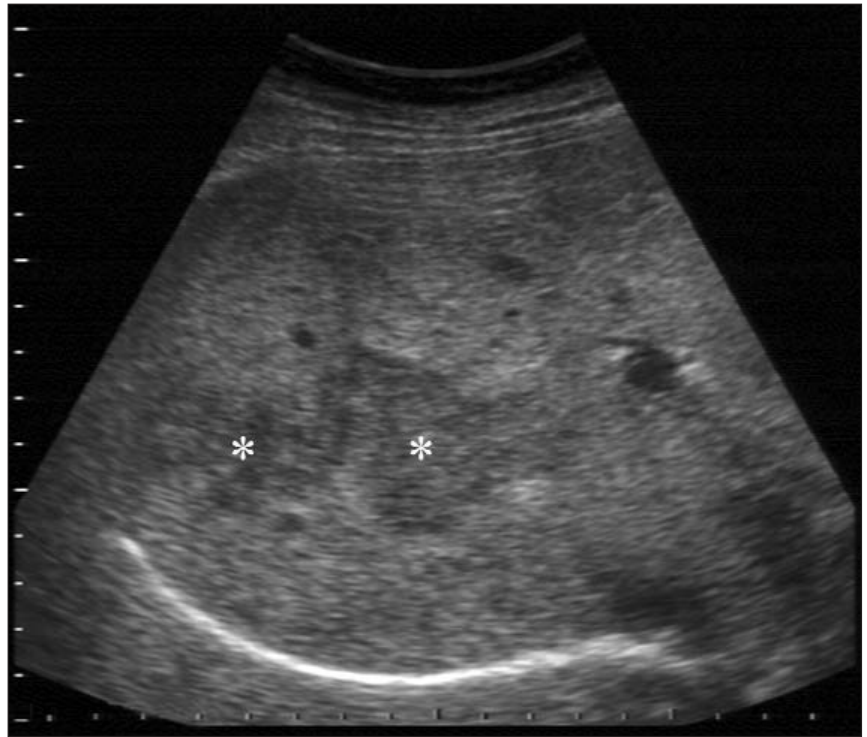
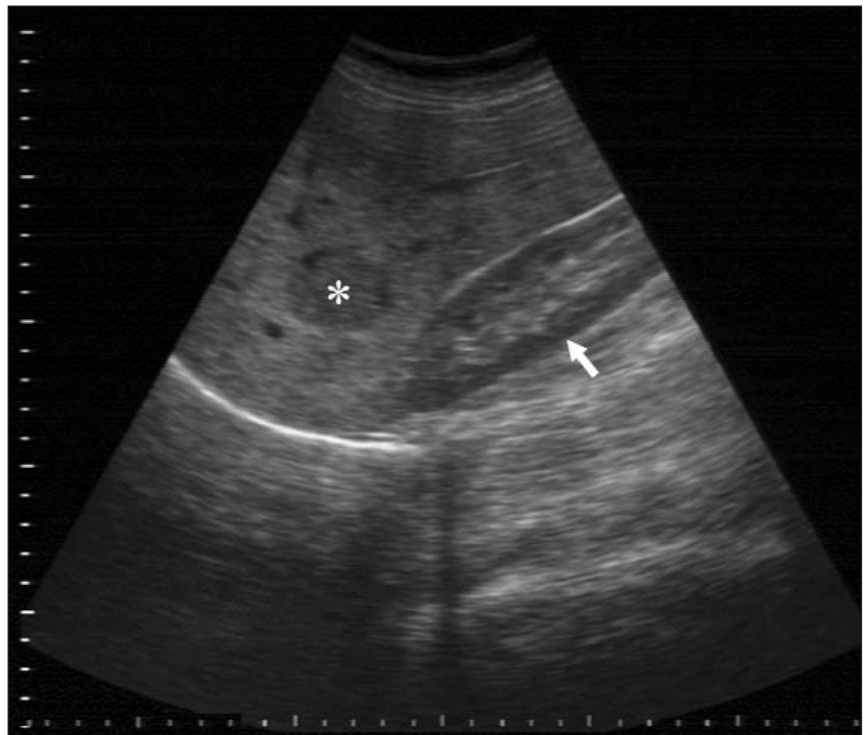


Figure 2
Abdominal ultrasound. Round hypoechoic lesion, 3.5 cm in diameter (asterisk) in the right liver lobe. Right kidney marked with an arrow.



cer (4,8,14) or exceptionally cause intestinal intussusception (15).

We report an unusual case of a young woman investigated because of multiple hepatic focal involvement suspected of metastasis. Solitary amoebic caecal ulcer mimicked colonic neoplasm.

Case report

A 29-year-old woman was admitted to hospital elsewhere because of acute calculous cholecystitis

in February 2005. Multiple liver hypoechoic lesions were revealed by ultrasonography as an accidental finding. She had travelled to Egypt (June 2004) and India (December 2004) in the past. That is why search for parasitic infection was also carried out. Microscopy of stool specimens was repeatedly negative. After that the patient was referred to our Department for further diagnostics and treatment in July 2005. Abdominal ultrasonography confirmed multiple hypoechoic lesions in both liver lobes sus-

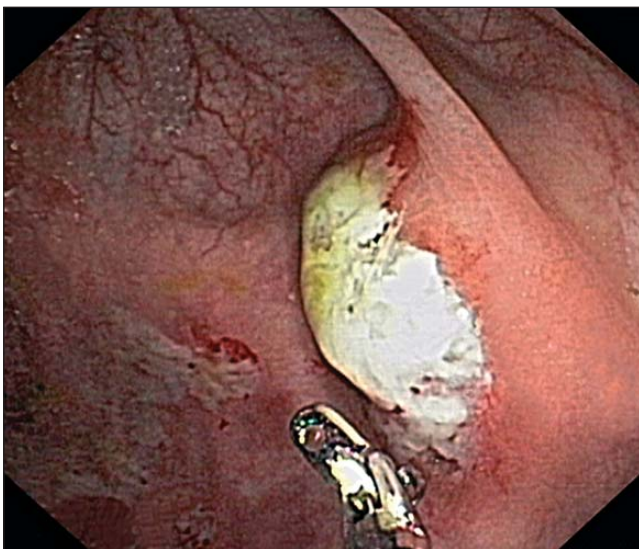


Figure 3
Colonoscopy. Solitary ulcer in the caecum (20 mm in diameter) covered with whitish material. No other abnormalities were found at colonoscopy.

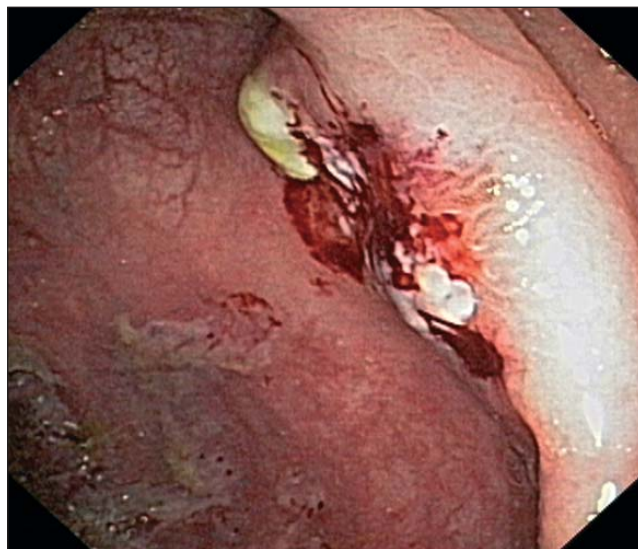


Figure 4
Colonoscopy. The same ulcer in the caecum as seen in Fig. 3. Partially visible ulcer base after biopsy. Infiltrated mucosa surrounding the ulcer.

pected of metastasis (Figs 1 and 2). In colonoscopy, there was a solitary ulcer (20 mm in diameter) surrounded by mucosal infiltration in the caecum (Figs 3 and 4). The remainder of the colon showed no abnormality. Initial macroscopic reading of this lesion was suspected of exulcerated colonic neoplasm. Histology of biopsy specimens surprisingly revealed *Entamoeba histolytica* infection (Figs 5 to 7). Finally biopsy of the liver lesion was carried out, histology found no amoebic abscess but focal nodular hyperplasia of

liver (there was a previous history of oral contraceptive pills for 13 years). I.v. metronidazole (500 mg tid) was administered for 14 days to treat the amoebiasis. Recovery was uneventful. Four months later the patient was symptom-free.

Discussion

Localized colonic *Entamoeba histolytica* infection resulting in a mass of granulation tissue forming an amoeboma is uncommon presentation, which can

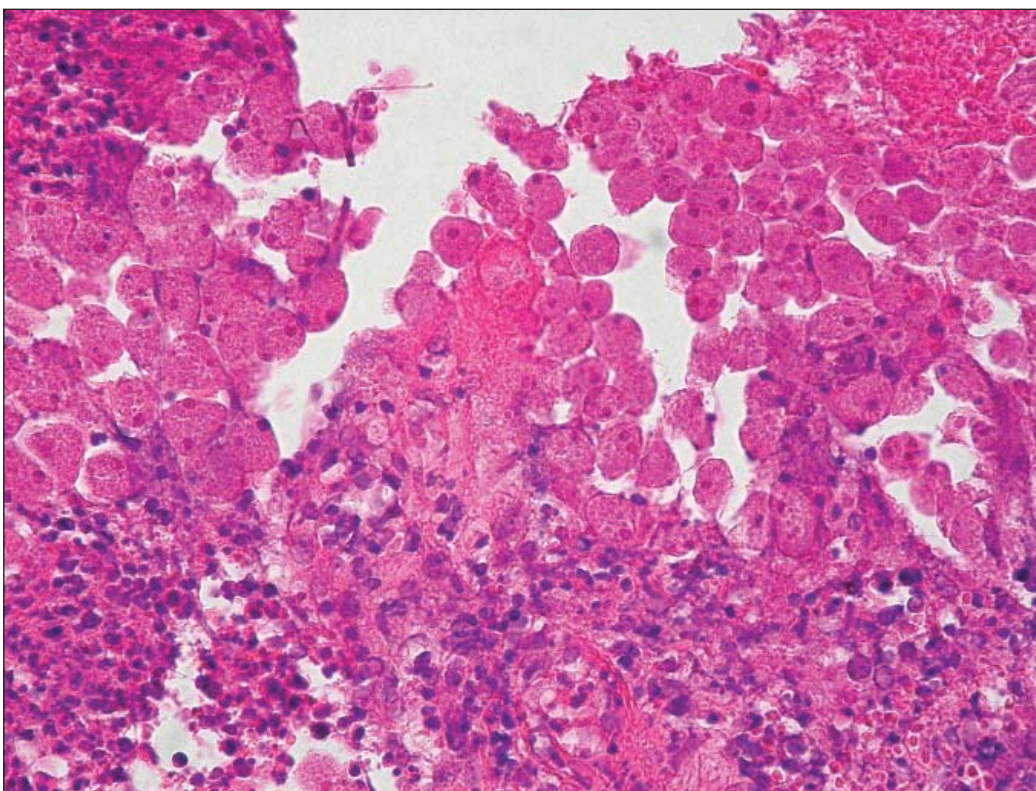


Figure 5
Photomicrograph of colonoscopy biopsy specimen. Numerous trophozoites of *Entamoeba histolytica*, identified at the base of ulcerated colonic mucosa (haematoxylin – eosin).

Figure 6
Intestinal amoebiasis.
Carmin staining
according to Best for
glycogen.

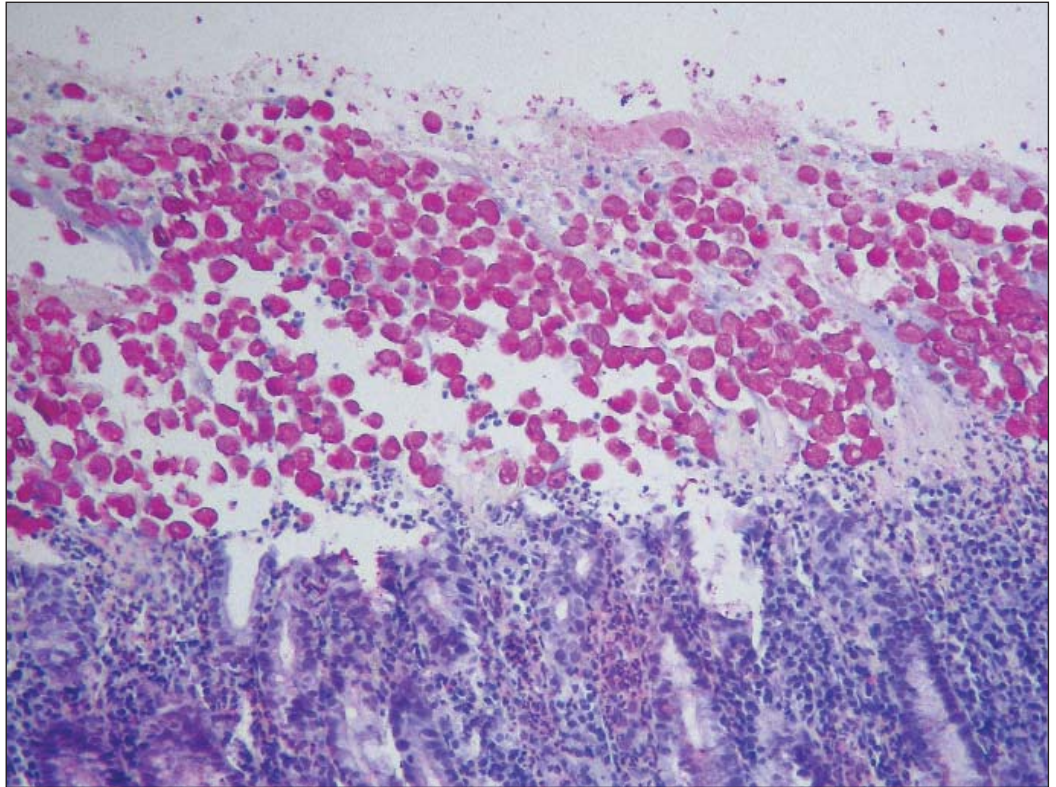
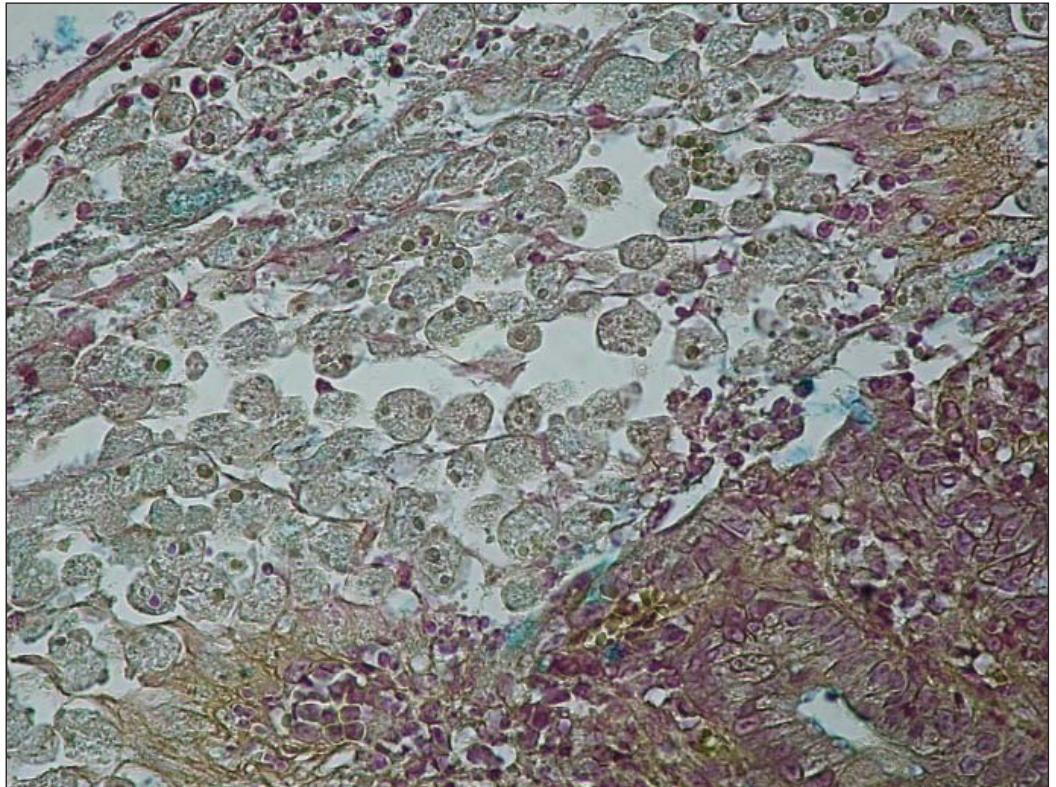


Figure 7
Intestinal amoebiasis.
Staining according to
Grocott.



mimic colonic neoplasm (4,8,14). In our case report we present such an unusual finding. A young female started to be investigated for multiple liver lesions suspected of metastases. The only one finding in colonoscopy was an ulcer in the caecum. Initial macroscopic diagnosis made at endoscopy was incorrect, taking into consideration possible colonic

malignancy. Histology surprisingly revealed *Entamoeba histolytica* infection. Liver biopsy did not prove either amoebic abscess or metastasis but oral-contraceptive-related focal nodular hyperplasia of liver. Treatment of amoebiasis with metronidazole was successful.

Entamoeba histolytica infection remains asympto-

matic in most patients (~ 90 %). The other 10 % of infections result in invasive amoebiasis characterized by amoebic colitis or, in a minority of cases, extraintestinal disease (most commonly amoebic liver abscess) (6). Clinical amoebiasis generally has a subacute onset, usually over one to three weeks. Symptoms range from mild diarrhoea to severe amoebic dysentery producing abdominal pain, bloody watery stools and low-grade fever or fever. Weight loss is present in a half of patients (1,13). Fulminant colitis with bowel necrosis leading to perforation and peritonitis occurs in approximately 0.5 percent of cases but is associated with a mortality rate of more than 40 percent (2). Young age, pregnancy, glucocorticosteroid treatment, malignancy, malnutrition, and alcoholism are recognized to be risk factors for severe disease and increased mortality following *Entamoeba histolytica* infection (8,11).

Intestinal amoebiasis can also present as a chronic, non-dysenteric syndrome of diarrhoea, weight loss, and abdominal pain which can last for years and can mimic inflammatory bowel disease (8). Patients with amoebomas (mimicking malignancy) usually are found to have a tender palpable mass. Perianal cutaneous amoebiasis and rectovaginal fistulae are other rare complications of amoebic intestinal disease (8).

The gold standard for diagnosis of amoebic colitis remains colonoscopy with biopsy, and colonoscopy should be performed when non-infectious causes of bloody diarrhoea are strong considerations in the differential diagnosis (e.g. ulcerative colitis) (3,6,7,10). Since the caecum and ascending colon are most frequently affected, colonoscopy is preferred to sigmoidoscopy. Classically, multiple punctuate ulcers are found, measuring 2 to 10 mm with essentially normal intervening tissue. However, the colonic epithelium may simply appear indurated with no visible ulcerations, and, in severe cases where the ulcers have coalesced, the mucosa may appear necrotic (6). Colonic ulcers are more likely to be present if the patient has diarrhoea as a presenting symptom or has had diarrhoea in recent past. Multiple large and left-sided ulcers are more common in elderly patients and in those in whom diarrhoea was the presenting symptom (12).

Focal solitary colonic infection with *Entamoeba histolytica* (amoeboma) must be considered in the differential diagnosis of colonic malignancy, inflammatory bowel disease and injury to the large bowel induced by non-steroidal anti-inflammatory drugs (NSAIDs-colopathy). Histology of biopsy specimens in those cases is mandatory for proper recognition of the infection.

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