

Pitfalls of palpable mass in the right iliac fossa

Report of two cases of chronic absceding appendicitis

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Abstract. Differential diagnosis of palpable mass in the lower right abdominal quadrant can sometimes be difficult. Two cases of chronic absceding appendicitis having been presented as a palpable abdominal mass in the right iliac fossa are described.

Key words: palpable mass, right iliac fossa, chronic appendicitis

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Souhrn. Diferenciální diagnostika hmatné rezistence v pravém dolním abdominálním kvadrantu může být obtížná. V článku jsou popsány dva případy chronické abscedující apendicitidy, které se projeví hmatnou rezistencí v pravé jámě kyčelní.

Klíčová slova: hmatná rezistence, pravá jáma kyčelní, chronická apendicitida

The right iliac fossa is predisposed to high tenderness because of anatomical and functional reasons. Differential diagnosis of palpable mass in lower right abdominal quadrant can sometimes be difficult. We report two cases of chronic absceding appendicitis having been presented as a palpable abdominal mass in the right iliac fossa.

CASE REPORTS

Case report 1

A 17-year-old lean man was admitted to hospital elsewhere due to intermittent cramping pain, intermittent low-grade fever lasting for five weeks. He lost 5 kg since the beginning of his complaints. The patient was referred to our hospital with suspected Crohn's disease. In physical examination, a tender palpable mass (10 cm in diameter) was detected in the right lower quadrant on admittance. The patient's body

temperature was 38 °C. There were no signs of malnutrition, rectal bleeding or fistulae. He denied diarrhoea, pain in his joints or skin abnormalities. Laboratory examination showed elevated serum inflammatory markers (ESR 84 mm/h, white blood count $17 \cdot 10^9/L$, C-reactive protein 175 mg/L). Therapeutic management with 5-aminosalicylic acid and ciprofloxacin was instituted. Glucocorticosteroids were not given in any form. His state improved gradually. The patient underwent repeated abdominal ultrasonography showing periappendicular infiltrate (Fig. 1). Colonoscopy found swollen ileocaecal valve (Fig. 2) but no features indicative of Crohn's disease. Enteroclysis revealed stenosis of the terminal ileum just before ileocaecal valve and displacement of small intestinal loops as a consequence of the periappendicular inflammatory infiltrate (Fig. 3). CT scan found periappendicular abscess formation (Fig. 4). Clinical diagnosis of chronic appendicitis with periappendicular infiltration was



Figure 1
Abdominal ultrasound. Periappendicular infiltrate.

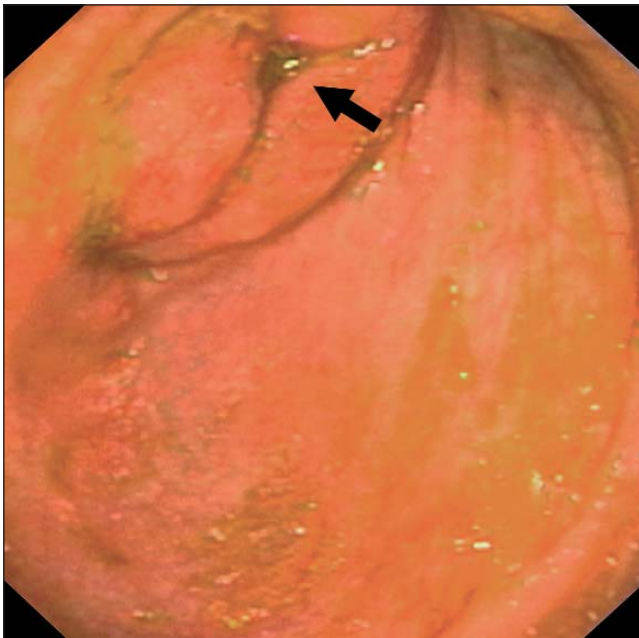


Figure 2
Colonoscopy. Swollen ileocaecal valve (arrow).



Figure 4
Spiral abdominal CT with oral and i.v. contrast medium administration. Periappendicular abscess formation (asterisk).



Figure 3
Enteroclysis. Stenosis of the terminal ileum just before the ileocaecal valve (arrow) and displacement of the small bowel loops as a consequence of the periappendicular infiltrate.

established. The patient underwent elective surgery, appendectomy was performed and histology confirmed the diagnosis of chronic absceding appendicitis. The follow up period after surgery is more than 18 months now and the patient has been doing well.

Case report 2

A 61-year-old man, a veterinary surgeon, was admitted for abdominal pain radiating to the lumbar region, sweat, low-grade fever and weight loss of 5 kg. Nausea and vomiting in the morning were further complaints. He suffered from above-mentioned symptoms for two years. At physical examination of

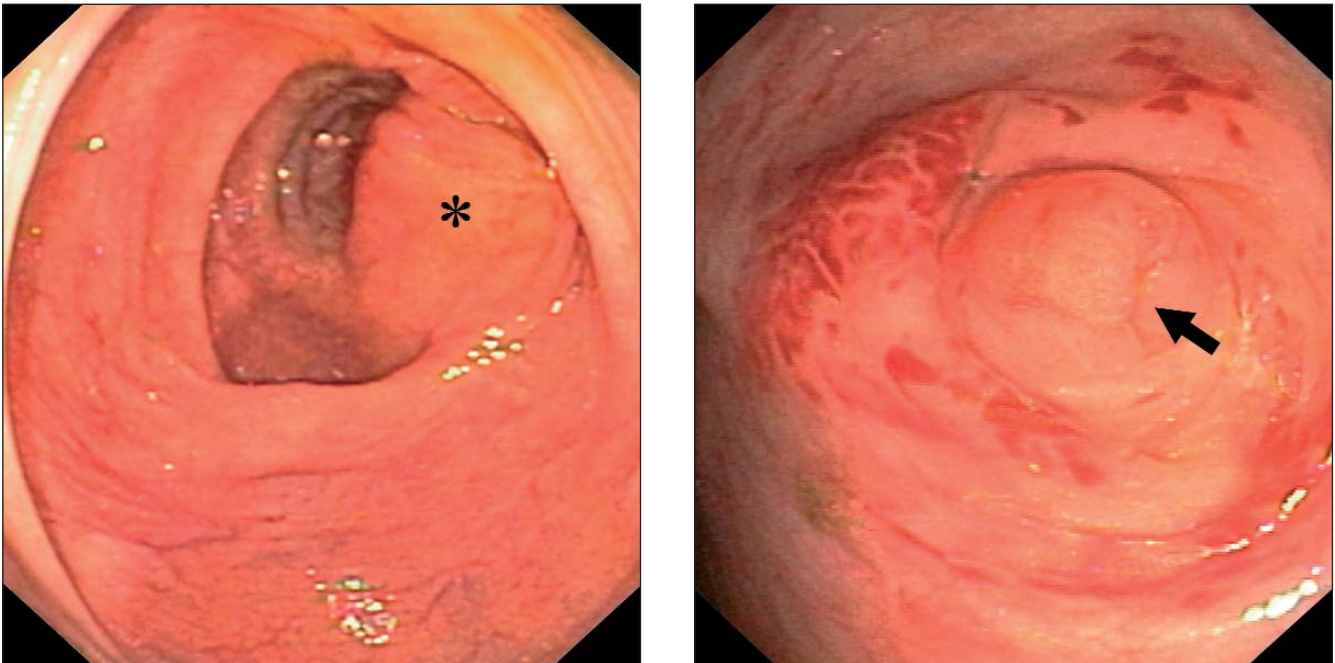


Figure 5

Colonoscopy. Fig. 5a (left): swollen ileocaecal valve (asterisk). Fig. 5b (right): swollen appendicular orifice (arrow) with mucosal haemorrhage.

the abdomen, palpable mass in the right lower quadrant was revealed. The patient was treated by ciprofloxacin and lactulose. Serum signs of inflammation were expressed in laboratory examination (white blood count $14.10^9/L$ with young neutrophil forms – 9 bands, ESR 70 mm/h, C-reactive protein 91 mg/L). Colonoscopy found a swollen ileocaecal valve (Fig. 5a) and swollen appendicular orifice with a mucosal haemorrhage (Fig. 5b). Surgery was recommended as malignant aetiology could not definitely be excluded. Intra-operatively, a tumour of mesentery in the region of the terminal ileum was found. Because of diagnostic uncertainty concerning possible malignancy right hemicolectomy was finally carried out. Histology of the resected specimen was benign and confirmed chronic fibroproductive periappendicitis. The patient has been symptom-free during subsequent two-year follow-up.

Discussion

Acute appendicitis is a well known clinical entity (7) but many physicians are unwilling to accept appendicitis as a chronic or recurrent illness (21). We have described two cases of chronic absceding appendicitis having been presented as a palpable abdominal mass in the right iliac fossa. The first patient suffered from intermittent mild abdominal pain, he recorded weight loss and low-grade fever. The onset of his

complaints was slow and gradual within several weeks. He was referred to our Department as a suspected Crohn's disease patient. The second patient complained about mild intermittent abdominal pain, sweating, low-grade fever and weight loss for two years. The cause was suspected of malignancy.

Diagnosis of recurrent and/or chronic appendicitis remains somewhat controversial (15,19,24,27) but has been documented in clinical series (1, 9, 11, 13, 14,16,23). Diagnosis of recurrent appendicitis presupposes that some cases of appendicitis can resolve without medical intervention (20). The percentage of these cases among appendicitis is estimated to be 6 % to 8 % (1,20). The recurrence rate is about 40 % (3). Chronic appendicitis is the pathological finding of fibrosis and chronic inflammation of the appendix (8,20). Many affected patients report previous episodes of pain and the relief of their symptoms after appendectomy (14). This problem is not common, and caution should be used in applying the diagnosis of chronic appendicitis to patients with poorly characterized chronic abdominal pain, because many of these patients are unlikely to improve with appendectomy (20). Chronic appendicitis counts among 1 to 7 % of all cases of appendicitis (5,10,16,21).

Chronic appendicitis can be diagnosed incidentally by colonoscopy (4,17,25). Theilmann et al. (25) described a curious case of chronic appendicitis which

had penetrated into the sigmoid colon. There was a finger-shaped structure resembling a large inverted diverticulum with adjacent signs of chronic inflammation (25). Colonoscopy was abnormal in both our cases, too. A swollen ileocaecal valve was found in the first case and swollen both ileocaecal valve and swollen appendicular orifice with mucosal haemorrhage was revealed in the second one.

Periappendicitis was revealed in our first patient by abdominal ultrasonography. Periappendicitis can accompany appendicitis but Fink et al. (6) published a series of 41 patients (recorded 1955 – 1985) admitted and operated for suspected appendicitis but having only periappendicitis (according to histology of resected specimens).

Differential diagnosis of a tender palpable mass in the lower right abdominal quadrant may sometimes be difficult. In this location, there are many physiological as well as many pathological causes. Chronic appendicitis has been documented as one possible causal agent (18). A patient presented with palpable mass must be investigated very carefully. Detailed analysis of history of disease, laboratory and imaging investigation is mandatory. Even a CT scan reading can be difficult in some cases (2,12,26). Differential diagnosis must consider malignancy (lymphoma, carcinoma, carcinoid, and stromal tumours), non-infectious inflammatory conditions (Crohn's disease) and different infectious diseases. It is also necessary to take into consideration rare causes (like mucocele, diverticulitis, ovarian cysts, ectopic pregnancy, hydronephrosis etc.).

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This article confirms the diagnosis of chronic absceding appendicitis as a cause of palpable abdominal mass. With regard to sometimes serious and unfavourable prognosis of abdominal pain and/or mass in the right iliac fossa, the physician's approach should be made cautiously to avoid diagnostic errors. The diagnostic process may be altered by lack of specificity of clinical, laboratory, imaging or even histological signs. But in case of difficulties re-examination (radiological, endoscopic or even, although exceptionally, surgical exploration with histological examination) should be carried out and some of the therapeutic tests should be warning. Each diagnostic difficulty, especially in case of uncertainty, should rather be referred to a gastroenterology centre.

To draw a general conclusion from our two cases of chronic absceding appendicitis, in patients who were presented with a longer duration of symptoms (more than a week) and who had findings localized in the right lower quadrant initial treatment should be with antibiotics, intravenous fluids, and bowel rest. These patients will often have a palpable mass on physical examination and a CT scan may reveal an abscess (22). Immediate surgery in patients with a long duration of symptoms is associated with increased morbidity, often requiring extensive dissection and possibly leading to injury of adjacent structures, such as the small bowel, and the need for an ileocelectomy or caecostomy. Fortunately, these patients uniformly respond to non-operative management since the appendiceal process has already been "walled-off" (7). Elective surgery (i.e. within 8 weeks) represents the definitive solution.

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