Isolated Mesosigmoidal Hydatid Cyst as an Unusual Cause of Colonic Obstruction: Report of a Case

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Abstract We report herein an unusual case of primary mesosigmoidal hydatid cyst that presented as acute left colonic obstruction mimicking sigmoid colon cancer. A 61-year-old man with a 3-day history of abdominal pain, distention, obstipation, vomiting, and fever was admitted to the emergency department of our hospital. Surgery was performed under a presumptive diagnosis of acute left colonic obstruction. The intraoperative findings were highly suggestive of sigmoid colon carcinoma and Hartmann’s procedure was performed. Histopathological examination of the pathological specimen revealed an isolated hydatid cyst embedded in mesosigmoid which had caused mechanical sigmoidal obstruction. Primary extrahepatic, intra-abdominal localization of a hydatid cyst is not unusual. Therefore, as a hydatid cyst may cause a wide variety of clinical syndromes, it should be kept in mind in the differential diagnosis of mechanical bowel obstruction, especially in endemic regions.

Key words Mesosigmoid · Hydatid cyst · Colon · Obstruction

Introduction

Hydatid disease caused by the larval stage of Echinococcus granulosus has been known to man since as far back as the time of Hippocrates and Aristoteles. In fact, Hippocrates identified the hydatid cyst in the human liver and named it “Jecur aqua repletum.” Even now, despite significant advances in the diagnosis and surgical treatment of human hydatid disease, it remains a serious condition necessitating careful population-based preventive measures.

Approximately 65%–75% of all hydatid cysts develop in the liver. However, a wide range of unusual anatomical sites in the abdomen has been reported, including the spleen, kidney, pancreas, and ovaries as well as dissemination within the abdominal and pelvic cavities.1–5 Hydatid cysts in the abdominopelvic cavities usually originate from liver hydatid cyst(s), either by extrusion or intraperitoneal rupture.6 However, primary mesosigmoidal hydatid cyst is an exceptional condition. This report describes an unusual case of primary mesosigmoidal hydatid cyst in a patient who presented with acute left colonic obstruction mimicking sigmoid colon cancer.

Case Report

A 61-year-old man was admitted to the emergency department of our hospital with a 3-day history of abdominal pain, distention, obstipation, vomiting, and fever. His past medical history was unremarkable. Physical examination revealed a distended abdomen with mild abdominal discomfort and hyperactive bowel sounds. There was no guarding and rebound tenderness or any palpable abdominal mass. Digital rectal examination revealed no abnormalities and the vital signs were within normal limits. The only hematologic abnormalities were hemoconcentration and leukocytosis of 21000/mm³. The serum electrolyte levels were normal. An abdominal X-ray revealed a dilated right and transverse colon and lack of air in the rectum, highly suggestive of left colonic obstruction. An abdominal ultrasound scan demonstrated dilated colonic segments...
and a moderate amount of fluid in the abdominal cavity which correlated well with his clinical condition. After prompt initial resuscitation, he was taken to the operating room for emergency surgery under a presumptive diagnosis of left colonic obstruction. Exploratory laparotomy revealed an obstructing, solid, and mobile sigmoidal mass measuring $4 \times 4 \times 6$ cm. The colonic segments proximal to the mass were remarkably dilated. The intraoperative findings were suggestive of sigmoid colonic carcinoma, but detailed abdominal exploration to detect any potential organ metastasis or peritoneal studding revealed no lesion suggestive of tumor metastasis. Hartmann’s procedure was performed. Macroscopic findings of the resected specimen included approximately 15 cm of resected colonic segment with multiple, obstructing hydatid cysts in the serosal adipose tissue and mesosigmoid, ranging from 1.5 to 6 cm in diameter (Fig. 1). Histopathologic examination of the cyst wall revealed a fibrous capsule, dense mononuclear infiltrate, proliferated capillaries, and scattered eosinophils in the neighboring adipose tissue (Fig. 2). Within the cyst lumen, detached laminated membranes and a fragmented thin germinal layer were present; however, no visible scolex was detected (Fig. 3). To exclude the possibility of a primary hydatid cyst in the liver or lung, a thoracoabdominal computerized tomography examination was performed on postoperative day (POD) 5, but no evidence of any remnant cyst was found. Serologic analysis performed on POD 5 was positive for a hydatid cyst at 1/256 dilution by enzyme-linked immunosorbent assay and was still positive at 1/64 dilution 3 months later. The postoperative period was uneventful and the patient was discharged on POD 7 with 200 mg/day oral albendazol treatment. He remains free of disease, 4 months after his operation.

**Discussion**

Human hydatid disease has been a problem in Turkey since the successful establishment of the sheep industry. It is essentially localized in the liver and the lung, accounting for 80% of localizations with the remaining 20% being randomly distributed in the spleen, kidneys, bones, and other sites. Early efforts at control based on sporadic attempts to publicize the life cycle of the parasite and its danger to human health had no apparent effect. Despite preventive measures, echinococcal disease continues to be an endemic, widely distributed parasitosis with potential presentation worldwide.

Although hydatid cysts may develop in virtually any anatomical site, primary mesosigmoidal involvement is extremely rare and to the best of our knowledge, the