A 52-year-old male patient admitted to the hospital with abdominal pain, postprandial bloating, and occasional nausea and vomiting for about 6 months. On abdominal physical examination, the patient had abdominal pain with deep palpation in the left upper quadrant. Echinococcus indirect hemagglutination antigen (IHA) test of the patient was positive in 1/640 titer. On CT scan, there was a cystic mass approximately 70 * 60 mm in size in the distal pancreas and bilateral renal cysts. Albendazole treatment was initiated with a dose adjustment according to the patient’s weight for 4 weeks. After a 14-day break from albendazole treatment, the patient was prepared for elective surgery. Total cyst resection was performed with partial distal pancreas resection without perforation. Control abdominal CT was performed to evaluate the abdominal cavity on postoperative day 5, and no pathology was observed. Therefore, both drains were taken out. The patient was discharged on the sixth postoperative day.

Keywords
Albendazole, Echinococcus Granulosus, Hydatid Cyst, Pancreas
Introduction
Hydatid cyst (HC), caused by Echinococcus granulosus or Echinococcus multilocularis parasite, is mostly seen in the liver and lungs, it can rarely be seen in all organs and soft tissues. In the studies conducted, the incidence of isolated pancreatic hydatid cyst has been reported to be 1-2% [1]. Due to the low prevalence of the disease, it is often confused with cystic lesions of the pancreas, often with pseudocysts. HC can be asymptomatic for a long time. Symptoms vary according to the size and location of the cyst. As the size of the cyst grows, symptoms occur due to compression on surrounding organs. Basic laboratory tests (hemogram, biochemical analysis, tumor markers), Echinococcus indirect hemagglutination antigen (IHA) test, and imaging tools can be helpful at diagnosis. In cases scheduled for operation, surgery should be planned after 1 month of albendazole treatment [2]. In this case report, we aimed to present a patient with HC localized distal to the pancreas.

Case Report
A 52-year-old male patient admitted to Erzurum Regional Education and Research Hospital, Erzurum, Turkey in August 2019. He had abdominal pain, postprandial bloating, and occasional nausea and vomiting for about 6 months. The patient’s complaints had increased significantly in the last month. The patient had no additional disease, except for a history of tuberculosis 10 years ago. In addition, the patient underwent splenectomy due to trauma four years ago. On evaluation, the vital findings of the patient were as follows: blood pressure: 134/72 mm Hg, pulse rate: 108 beats per minute, oxygen saturation on room air: 96%, and body temperature: 37.7°C. The patient’s height was 172 millimeters and he weighed 82 kilograms. On physical examination of abdomen, the patient had abdominal pain with deep palpation in the left upper quadrant. A digital rectal examination was also normal. Other system examinations were normal. In laboratory findings, basic hemogram, biochemical parameters were unremarkable. Tumor markers (carcinoembryonic antigen, CA19-9, alphafetoprotein) of the patient were also normal. Echinococcus indirect hemagglutination antigen (IHA) test of the patient was positive in 1/640 titer.

Ultrasound revealed a mass with a diameter of 60 mm between the distal pancreas and left kidney (simple cyst or cyst hydatic). Both computed tomography (CT) and magnetic resonance imaging (MRI) were planned for the patient to evaluate the origin of the mass and the surrounding organ neighborhood. On CT scan, there was a cystic mass approximately 70 x 60 mm in size in the distal pancreas and bilateral renal cysts (Figure 1). According to the classification of echinococcal cysts by the World Health Organization (WHO), this mass was considered as CE 2 (active stage). On MRI, a cystic lesion 65x55x77 mm in size in the tail of the pancreas was seen (Figure 2). After IHA test positivity, CT and MRI images were evaluated together, hydatid cyst was considered in the patient, and albendazole treatment was initiated by dose adjustment according to the patient’s weight (albendazole tablet 400 mg every 12 hours) for 4 weeks. After a 14-day break from albendazole treatment, the patient was prepared for elective surgery. Open surgery was performed with a midline incision. On intraoperative evaluation, a cystic mass was seen anterior of the left kidney. Sponges impregnated with the hypertonic solution were placed around the mass. The mass was resected completely without perforation. The cyst was opened on the operation table. There were multiple daughter cysts with germinative membrane. A drain was placed at the border of the distal pancreas (drain 1), while the other drain was placed at the left sub-diaphragmatic area (drain 2).

The patient was followed in the service during the postoperative period. Oral intake was opened 6 hours after surgery. On the postoperative day 1, about 200 cc serohaemorrhagic fluid came from drain 1, while there was no fluid coming out of drain 2. The amylase level of drain (1) fluid was measured as 1224 U/L, and the serum amylase level was 480 U/L at the same time (normal range= 30-118 U/L). On the postoperative day 2, about 100 cc
Pancreatic hydatid cyst located distally: A case report

Deniz Öçal, Tolga Kalaycı

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Pancreatic hydatic cyst as vomiting, nausea are the main complications in untreated perforation, abscess formation and compression findings such that the definitive diagnosis of pancreatic hydatid cysts can be asymptomatic for a long time. Symptoms vary according to the size and location of the cyst. As the size of the cyst grows, symptoms occur due to compression on surrounding organs. Complain such as abdominal pain, bloating and nausea may be seen. Rarely, obstructive jaundice and cholangitis may occur in cysts located in the head part due to compression on the bile ducts. Acute and chronic pancreatitis can also be seen in hydatid cysts that cause compression on the pancreatic canal and fistula.

Laboratory tests, Echinococcus indirect hemagglutination antigen (IHA) test and radiological imaging tools are used for diagnosis. The sensitivity of IHA is 60-100%, but not observed in our patient. ELISA and IHA are commonly used during diagnosis. The sensitivity of IHA is 60-100%, but its specificity is reported to be low. Serological tests may be negative if the amount of antigen in the bloodstream is low. The septal structure and daughter vesicles can be seen on ultrasonography. Advanced imaging tools such as CT, MRI are used to evaluate the differential diagnosis and to evaluate the organ surrounding the cyst. It is difficult to distinguish HC from head to toe. Radiographics. 2003; 23(2):475-94.

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