

A rare cause of acute abdomen in children: an intrabiliary rupture of hydatid cyst

Çocuklarda nadir bir akut karın sebebi: Safra yollarına açılan karaciğer kist hidatiği

To the Editor,

Although it is frequent to see hydatid cyst patients in endemic areas, intrabiliary rupture of hydatid cyst in children is rare. Intrabiliary rupture was first reported in 1928 by Dew (1). Intrabiliary rupture is a serious complication of hepatic hydatid cyst. The incidence varies from 1% to 25% in adult patients (2). Rupture of the hydatid cyst into the bile ducts is a rare condition in children (3). In this report, a case of acute abdomen caused by intrabiliary rupture of a hydatid cyst is presented.

An eight-year-old male patient was admitted with a two-day history of right upper quadrant abdominal pain, nausea and vomiting. He had no history of previous disease. His family history was unremarkable. On physical examination, he had right upper quadrant tenderness, guarding and rebound. The rest of the systemic examination was unremarkable. Laboratory tests revealed: leukocyte count, 9400/mm³; total bilirubin, 4.3 mg/dl (normal value, <1 mg/dl); direct bilirubin, 3.8 mg/dl (normal value, <0.5 mg/dl); γ -glutamyltransferase, 204 U/L (normal range, 3-52 U/L); alanine transaminase, 760 U/L (normal range, 5-45 U/L); and aspartate transaminase, 626 U/L (normal range, 5-45 U/L). The results of the remaining blood parameters tested were within normal limits. Plain abdominal radiography did not reveal any abnormalities. Abdominal ultrasound (US) examination revealed an 8x9x11 cm cystic mass located within the right hepatic lobe and dilated intrahepatic biliary ducts and common hepatic duct. US showed an echogenic intrabiliary material with no acoustic shadowing in the bile duct. Computed tomography results also supported these findings (Figure 1). Serologic test for echinococcal antibody was found to be positive (1/640).

During the operation, the cyst was treated by evaluation+omentoplasty+drainage of the cystic cavity. The hydropic gallbladder was removed and intraoperative cholangiography showed an obs-

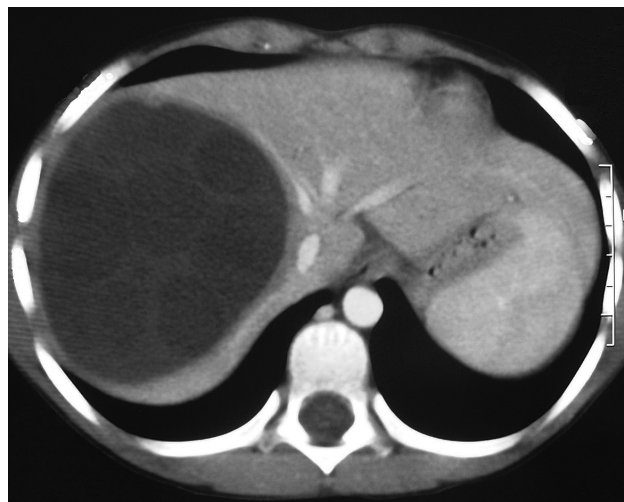


Figure 1. Computed tomography scan reveals a hepatic hydatid cyst in the right hepatic lobe.

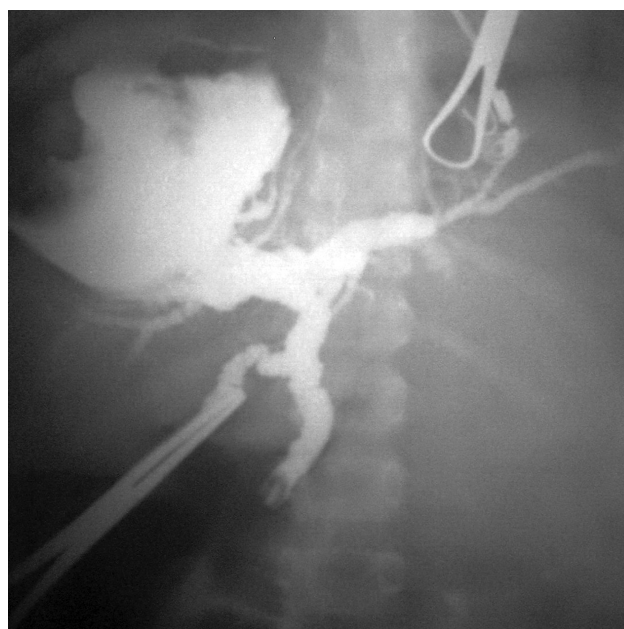


Figure 2. Intraoperative cholangiography demonstrated an obstruction in the bile duct due to daughter cysts.

truction in the bile duct (Figure 2). Bile duct exploration was carried out, and a daughter cyst was found to be obstructing the bile duct and was removed. A T-tube was left in place. Cefoperazone and metronidazole were given for seven days in the postoperative period. The postoperative course of the patient was uneventful.

In the second and fourth postoperative weeks, a pouchography was performed through the external drain to monitor the cyst cavity. In the second postoperative week, when the T-tube drainage ceased, a cholangiography was performed through the T-tube. The T-tube was closed and later removed when the cholangiography and pouchography showed that there was no communication between the cyst cavity and the bile duct. In the second postoperative week, total and direct bilirubin levels

had decreased to 0.6 mg/dl and 0.4 mg/dl, respectively. Upon normalization of liver function tests, albendazole treatment was started in the second week postoperatively and was continued for three months, in a monthly cyclic protocol. The external drainage ceased and the cavity size decreased in the fourth postoperative week, and the cavity drain was removed.

When the diagnosis of intrabiliary rupture can be done pre- or intra-operatively, morbidity decreases. In conclusion, hydatid cyst patients with right upper quadrant pain, jaundice and abnormal laboratory findings should be evaluated carefully in terms of biliary obstruction. If biliary obstruction is suspected, an intraoperative cholangiography should be performed in order to rule out biliary obstruction due to daughter cysts.

REFERENCES

1. Dew H. Some complications of hydatid disease. *Br J Surg* 2001; 18: 289-93.
2. Erzurumlu K, Dervişoğlu A, Polat C, et al. Intrabiliary rupture: an algorithm in the treatment of controversial complication of hepatic hydatidosis. *World J Gastroenterol* 2005; 11: 2472-6.
3. Murty TV, Sood KC, Rakas FS. Biliary obstruction due to ruptured hydatid cyst. *J Pediatr Surg* 1989; 24: 401-3.

Serdar MORALIOĞLU, İ. Onur ÖZEN,
Çağatay AFŞARLAR, Ramazan KARABULUT,
Billur DEMİROĞULLARI, A. Can BAŞAKLAR,
Nuri KALE

Department of Pediatric Surgery, Gazi University, School of Medicine, Ankara