

# Pyloric Obstruction Due to Multiple Cyst Hydatidosis: A Case Report

Melih AKINCI<sup>1</sup>, Zafer ERGÜL<sup>1</sup>, Kerim Bora YILMAZ<sup>1</sup>, Engin ÖLÇÜCÜOĞLU<sup>1</sup>, Hakan KULAÇOĞLU<sup>1</sup>

<sup>1</sup> Department of General Surgery, Ankara Diskapi Yıldırım Beyazıt Teaching and Research Hospital, Ankara, Turkey

## ABSTRACT

*The radiologic imaging of a 74-year-old female with the complaints of emesis and vomiting revealed multiple intra-abdominal cystic lesions, which were consistent with cyst hydatid; the largest cyst measured 16 cm in diameter. Intra-operatively, it was observed that the omental cysts and the largest of the hepatic cysts were compressing the pylorus and pulling down the major curvature with a volume and weight effect. Omentectomy and pericystectomy of the large cyst in the liver were performed. The patient was free of complaints due to gastric obstruction postoperatively and was discharged with antiparasitic therapy. Six months after the operation, although the patient had no complaint, her abdominal tomography demonstrated no regression of the cystic lesions. It should be kept in mind that in endemic regions, patients with multiple cyst hydatidosis can present with different clinical situations.*

**Key words:** Cyst hydatidosis, Pyloric obstruction, Echinococcosis

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## ÖZET

### Piloric Obstrüksiyona Neden Olan Multipl Kist Hidatozis Olgusu

*Yetmiş dört yaşında bulantı-kusma şikayetleriyle başvuran kadın hastanın görüntüleme incelemelerinde intraabdominal en büyüğü 16 cm çapa ulaşan kist hidatikle uyumlu multipl kistik lezyonlar izlendi. İntraoperatif karaciğerdeki büyük ve omentumdaki çok sayıda kistik lezyonun hacim ve ağırlık etkileriyle pilora bası yaptığı ve mide büyük kurvaturu aşağı çektiği izlendi. Omentektomi ve karaciğerdeki büyük kiste perikistektomi uygulandı. Postoperatif dönemde gastrik obstrüksiyona bağlı şikayetleri kalmayan hasta antiparaziter tedavi ile taburcu edildi. Altı ay sonra kontrolünde şikayetleri olmayan hastada multipl kist hidatozisde radyolojik gerileme izlenmedi. Endemik bölgelerde multipl kist hidatozisli hastaların değişik klinik tablolarla karşımıza çıkabileceğini aklımızda tutmalıyız.*

**Anahtar kelimeler:** Kist hidatozis, Pilor obstrüksiyonu, Ekinokokus

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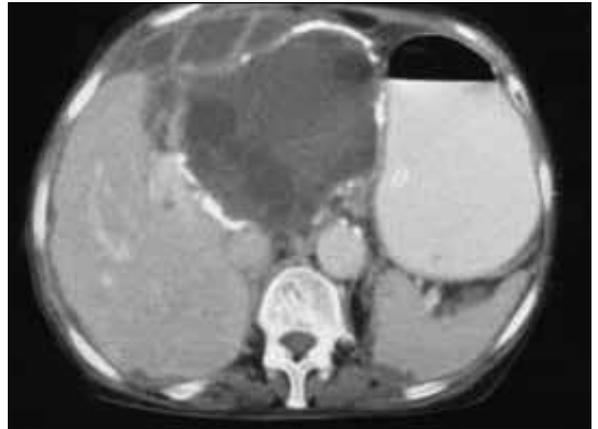
## INTRODUCTION

Echinococcosis is a zoonotic infection in which the liver is the most frequently involved organ, followed by the lungs. The heart, spleen, kidney, and brain are sometimes involved<sup>[1]</sup>. Hydatid cyst can be seen in almost every part of the human body<sup>[2-5]</sup>. We herein present a case with the complaints of distal gastric obstruction who had multiple cyst hydatidosis of the liver, spleen, kidney, omentum and pelvis, in which large hepatic and omental cysts were compressing the pylorus and pulling down the major curvature with a volume and weight effect.

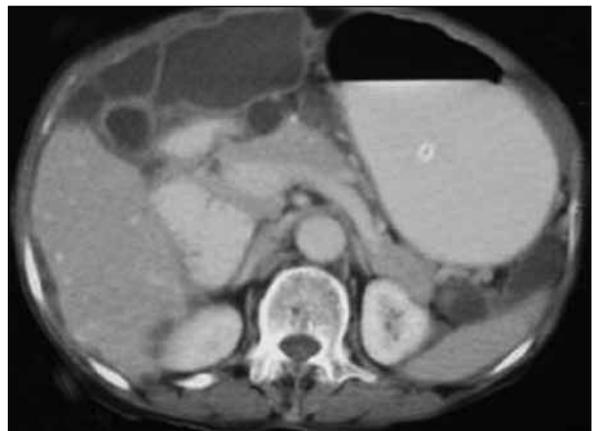
## CASE REPORT

A 74-year-old female was admitted to the emergency service with the complaints of abdominal pain, emesis and vomiting. She had a history of umbilical hernia operation one year before. She had no other operation history and no coexisting disease. She had defecated two hours before her admission. Abdominal distension and tenderness were noted on the physical examination, while intestinal auscultation was normal. Her abdominal plain X-ray revealed no extraordinary finding for intestinal obstruction, but dilated stomach was noted. With nasogastric decompression, 800 mL of gastric fluid content was collected. The rectal examination was non-specific. She was hospitalized for further investigation with the prediagnosis of atonic stomach. Her esophagus-stomach-duodenum endoscopy revealed excessive food residuals in the lumen, hyperemia of the fundus, corpus and antrum and deformation of the pylorus and bulbus with edema. Her ultrasound demonstrated multiple irregular cystic lesions of the liver, with the largest measuring 40 x 45 mm in the right posterior hepatic segment. There were also multiple multiloculated heterogenic lobulated cystic lesions beneath the xiphoid-epigastric-umbilical region (the largest measuring 150 x 120 mm), multiple cysts in the left kidney and multiple irregular septated cystic lesions in both adnexal regions (the largest was on the left located towards the anterior of the psoas muscle).

Abdominal computerized tomography also revealed multiple cystic lesions with capsular calcification in the liver, spleen and kidney and as well as in the epigastric, umbilical and pelvic regions of the abdomen, which was consistent with cyst hydatid. The giant cystic lesion with the largest diameter (160 x 150 mm) was localized between the right hepatic lobe and anterior wall of the epigastric abdominal wall (Figure 1a-1d).



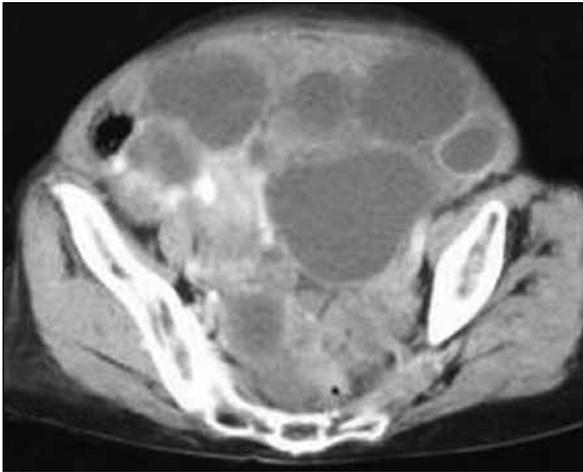
**Figure 1a.** Abdominal computerized tomography revealed a giant cystic lesion (160 x 150 mm) with capsular calcification, which was localized between the right hepatic lobe and anterior wall of the epigastric abdominal wall.



**Figure 1b.** Distension of the stomach and multiple cyst hydatidosis of varying localization and size and with calcific capsule.



**Figure 1c.** Multiple cyst hydatidosis at the inferior umbilicus.



**Figure 1d. Multiple cyst hydatidosis in the pelvis.**

The patient's routine laboratory tests were normal, and echinococcosis immune hemagglutination test (Dade Behring, Marburg, Germany) test was 1/1024 positive. A diagnosis of multiple cyst hydatidosis was made and open surgical treatment was planned. On exploration, multiple cystic lesions originating from the right hepatic lobe and omentum, with the largest diameters of 15 cm and 10 cm, respectively, were observed. Diffuse peritoneal hydatid cystic dissemination was also present. The omental and largest hepatic cysts were compressing the pylorus and pulling down the major curvature with a volume and weight effect (Figure 2a-2b). Total omentectomy and unroofing of the giant hepatic cyst were performed.

The patient's complaints regarding gastric passage resolved postoperatively. The post-operative course was uneventful. The patient was discharged on the fourth post-operative day. Albendazole with praziquantel regimen was prescribed. Histopathological examination reported a hydatid cyst by demonstrating protoscolex within the cyst. Six months after the operation, although the patient had no complaint, her abdominal tomography demonstrated no regression of the cystic lesions.

## DISCUSSION

Hydatid cyst is prevalent in developing countries, especially in those involved with agriculture and stockbreeding, such as Turkey<sup>[6]</sup>. The eastern, central and European regions of Turkey are endemic for this disease<sup>[7]</sup>. The presented patient was from the central



**Figure 2a. Multiple cysts in the omentum reaching 10 cm in diameter.**



**Figure 2b. The omental cysts were pulling down the major curvature with a weight effect.**

region of Turkey. Hydatid disease caused by the larval stage of *Echinococcus granulosus* is recognized as a public health problem<sup>[8]</sup>. Echinococcosis is a zoonotic infection in which the liver is the most frequently involved organ, followed by the lungs<sup>[9]</sup>. In addition to the liver and lungs, hydatid cysts with unusual localizations have previously been reported from Turkey, including the pancreas, spleen, kidney, intra-

abdominal cavity, ovary, breast, mediastinum, chest wall, muscle, adrenals, lungs, mediastinum, thyroid gland, anterior abdominal wall, thigh, presacral space, brain, cavernous sinus, submandibular gland, heart, pleura, retrocruural tissue, inguinal canal, bone, bile duct, soft tissue, and the retroperitoneum<sup>[2-5]</sup>.

The ideal treatment of a cystic or solid mass is total excision, but it will be aggressive and rarely possible in hydatid cysts of the liver. Partial excision of the (peri) cyst with or without omentoplasty is usually more appropriate and generally results in the best clinical response<sup>[10]</sup>. However, total excision is technically easier for intra-abdominal non-hepatic hydatid cysts of the omentum or free peritoneal cysts<sup>[11]</sup>. The present case was treated by performing a total omentectomy and unroofing of the giant hepatic cyst. However, excision or drainage of all cystic lesions in this case was impossible due to the numerous cysts involving several parenchymal organs and the diffuse peritoneal dissemination.

The World Health Organization Informal Working Group on Echinococcosis proposed a standardized ultrasound classification based on the active-transitional-inactive status of the cyst as suggested by its sonographic appearance<sup>[12]</sup>. In the present case, the hydatid cysts of the liver, spleen and kidney, and intra-abdominal non-hepatic cysts of the epigastric, umbilical and pelvic regions of the abdomen were highly consistent with cyst hydatid. Ultrasound and tomography revealed multiple cystic lesions with some having capsular calcification and typical daughter vesicle content as stated with different cystic echinococcosis types. In addition, hemagglutination test supported the diagnosis of hydatid disease. Finally, histopathological examination reported a hydatid cyst by demonstrating protoscolecocytes within the cyst.

It is generally accepted that systemic albendazole treatment is not an alternative to surgical treatment<sup>[13]</sup>. Albendazole may be given as an adjuvant to surgery to avoid recurrence and to suppress subcentimeter lesions not yet visible by ultrasound. However, combination therapy with albendazole and praziquantel is effective in the treatment of hydatid cyst and can be used as an alternative to surgery in disseminated and nonoperable cases<sup>[14]</sup>. We thus prescribed an albendazole regimen in combination with praziquantel for this patient.

We herein reported a very rare presentation of multiple hydatid disease in which hepatic and omental

cysts were compressing the pylorus and pulling down the major curvature, causing distal gastric obstruction. Consequently, hydatid cysts should be considered in the differential diagnosis of intra-abdominal cystic masses, particularly in endemic regions. It should be kept in mind that multiple cyst hydatidosis can trigger or provoke different pathologic clinical situations due to their volume and weight effect, as seen in this case.

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**Address for Correspondence**

Melih AKINCI, MD

Department of General Surgery

Ankara Yildirim Beyazit Teaching and Research Hospital

Ankara-Turkey

E-mail: melihakinci@yahoo.com