

Sinistral Portal Hypertension Due to Pancreatic Hydatid Cyst

Sinistral Portal Hipertansiyona Neden Olan Pankreas Kist Hidatiği

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ABSTRACT

Hydatid disease is caused by *Echinococcus granulosus*. Hydatid cysts are commonly located in the liver and lungs. The occurrence of pancreatic hydatid cysts is very rare, even in endemic areas. Sinistral portal hypertension, which is rarely seen, occurs when a pathological process causes splenic vein occlusion. A 26-year-old male patient presented with abdominal pain. He had a history of operation for hydatid cyst of the lung 15 years ago. A left thoracotomy incision scar was observed during his physical examination. Laboratory findings revealed no abnormalities. Abdominal ultrasonography revealed a 96×69-mm lobular, contoured, well-circumscribed cystic lesion with thickened septation. Abdominal magnetic resonance imaging revealed a 100×76-mm smooth, bordered cystic lesion containing septations in the body and tail of the pancreas compressing the splenic artery and vein, causing sinistral portal hypertension. Dilatation was noted in the left gastroepiploic vein. The patient underwent cystotomy. Pancreatic fistula developed during the postoperative follow-up. The patient was discharged in 20 days without postoperative complications. No complications were observed during the follow-up period of 7 months. Surgery should be considered as a more conservative approach.

Keywords: *Echinococcus granulosus*, hydatid cyst, pancreas

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ÖZ

Kist hidatik, *Echinococcus granulosus* nedeni ile olmaktadır. En sık karaciğer ve akciğerde yerleşim göstermektedir. Pankreatik kist hidatik endemik bölgelerde dahi oldukça nadir görülmektedir. Sinistral portal hipertansiyon, splenik venin oklüzyonu ile ortaya çıkmaktadır. Nadir görülen bir durumdur. Yirmi altı yaşında erkek hasta, karın ağrısı nedeniyle başvurdu. Özgeçmişinde 15 yıl önce akciğer kist hidatik nedeniyle operasyon öyküsü mevcuttu. Fizik muayenede, sol torakotomi skarı mevcuttu. Laboratuvar inceleme normaldi. Tüm abdomen ultrasonografide 96x69 mm lobule konturlu, düzgün sınırlı, kalın septasyonlar içeren kistik lezyon saptandı. Abdominal magnetik rezonans incelemede sinistral portal hipertansiyona neden olan splenik arter ve vene bası yapan pankreas korpus ve kuyruk kesiminde, içinde septasyonlar içeren 100x76 mm düzgün sınırlı kistik lezyon mevcuttu, sol gastroepiploik vende dilatasyon saptandı. Hasta operasyona alındı. Kistotomi yapıldı. Postoperatif takiplerinde pankreatik fistül gelişti. Hasta postoperatif 20. gününde ek komplikasyon gelişmeden taburcu edildi. Takip süresi 7 ayda komplikasyon gelişmedi. Tedavide, konservatif yaklaşımdan daha çok cerrahi düşünülmelidir.

Anahtar Kelimeler: *Echinococcus granulosus*, kist hidatik, pankreas

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INTRODUCTION

Hydatid cysts are caused by *Echinococcus granulosus* and are commonly located in the lungs and liver (1, 2). The incidence of their location in the pancreas is very less (0.1–2%), even in endemic areas (2, 3). Due to their rareness, making a preoperative diagnosis is difficult. The differential diagnosis is also difficult with pseudocysts, cystadenomas, and cystadenocarcinomas in the foreground. Sinistral portal hyperten-

sion, which is rarely seen, occurs when a pathological process causes splenic vein occlusion. In the literature, four cases of hydatid cysts causing sinistral portal hypertension have been reported. These cases were of splenic hydatid cysts. Cases of pancreatic hydatid cysts due to sinistral portal hypertension have not been reported in the literature. In the present case report, we aimed to present the case of a patient with a pancreatic hydatid cyst causing sinistral hypertension.

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CASE REPORT

A 26-year-old male patient presented with abdominal pain. He had a history of operation for hydatid cyst of the lung 15 years ago. His family history was unremarkable. A left thoracotomy incision scar was observed during his physical examination. Laboratory findings revealed a leukocyte count of 5600 K/ μ L, hemoglobin level of 13 g/dL, and eosinophil count of 0.34 K/ μ L. Bilirubin, amylase, lipase, liver enzyme, and albumin levels; renal function test results; prothrombin time; and International Normalized Ratio (INR) were within the normal range. Serological testing was not performed. Abdominal ultrasonography (USG) revealed a 96×69-mm lobular, smooth, bordered cystic lesion with thickened septation in the middle-left quadrant. Abdominal magnetic resonance imaging (MRI) revealed a 100×76-mm smooth, bordered cystic lesion in the body and tail of the pancreas pressing against the splenic artery and vein, causing sinistral hypertension. Splenic hilus and gastroepiploic vein dilatation was also detected (Figure 1a-1f). The liver was normal in size. The patient filled the consent form and was operated. A 10-cm cyst was observed and drained via cystotomy. The patient developed pancreatic fistula during postoperative follow-ups and was medically treated. There were no additional complications, and patient was discharged in the 20th postoperative day. Abdominal computed tomography (CT) performed on the 30th postoperative day revealed isolated perigastric collateral venous dilatations starting from the splenic vein, following portal confluence draining in the superior mesenteric vein. The patient developed no complications during the 7 months of follow-up. The patient did not experience bleeding, and gastric varices did not appear following surgery.

DISCUSSION

The entry of eggs of *E. granulosus* into the gastrointestinal tract is the reason why hydatid cysts are mostly located in the liver. The second most frequent location is the lungs. Occurrence in the pancreas is very rare. They are mostly seen in the head (57%), body (24%), and tail (19%) (4). In our case, the hydatid cyst was located in the body.

Clinical findings vary with the location of hydatid cysts. Although patients with cysts located in the head may present with icterus, cholangitis, and pancreatitis, clinical findings are nonspecific for patients with cysts located in the tail and body (5, 6). Our patient presented with nonspecific abdominal pain.

Splenic vein occlusion results in back pressure with short gastric and gastroepiploic veins and subsequently via the coronary vein into the portal system. This results in the reversal of flow in these veins and the formation of gastric varices. Hypertension is confined to the left side of the portal system and is therefore distinct from generalized portal hypertension (7). Sinistral portal hypertension can prove difficult to distinguish from generalized portal hypertension as the presence of varices is commonly suggestive of a liver etiology. There are several causes of sinistral portal hypertension presented in the literature with most such cases due to the presence of a pathology in the pancreas. Chronic pancreatitis, pancreatic pseudocysts, and various pancreatic neoplasms have been reported as possible causes of sinistral portal hypertension (7, 8).

Pseudocysts, cystadenomas, cystic neoplasms and abscesses are important in the differential diagnosis. There are no specific

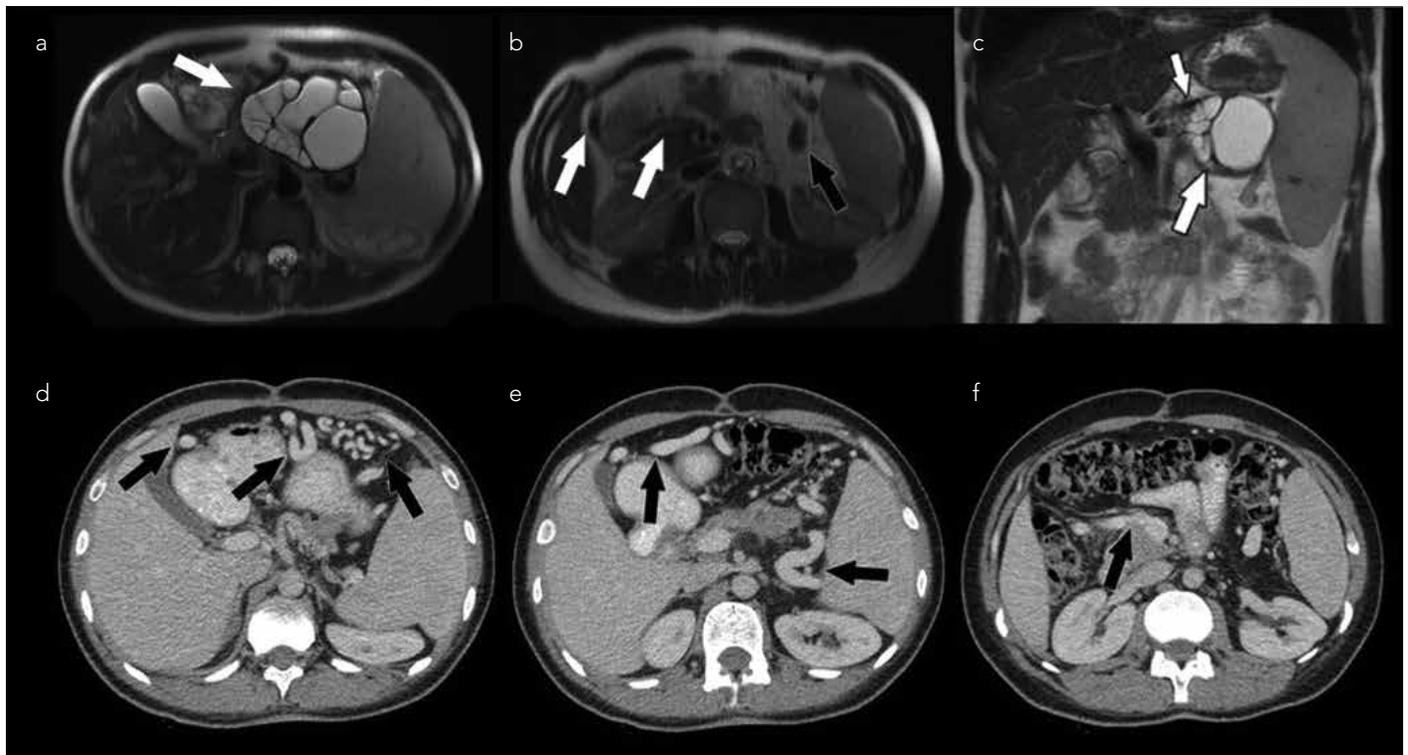


Figure 1. a-f. Axial (a, b) and coronal (c) MR images showing a 100×76-mm smooth bordered cystic lesion in the body and tail of the pancreas pressing against the splenic artery and vein, causing sinistral hypertension (d-f). Axial abdominal MR images showing splenic hilus and gastroepiploic vein dilatation

laboratory findings. Eosinophilia may be seen, and the complement fixation test is rarely used. ELISA as well as indirect agglutination (IAT) and indirect hemagglutination (IHA) test are more commonly used. While the sensitivity of the LAT and IHA tests is high (60–100%), their specificity is low (9). Abdominal USG, CT, and MRI are highly useful in making a diagnosis. Wall calcification, protoscolices, septations, and membrane detachment are characteristic radiological imaging findings (10). However, in rare locations, these specific findings may not be seen.

Rather than the conservative approach, surgery should be considered. The most commonly recommended treatment option for symptomatic sinistral portal hypertension has been surgical correction of the primary cause. Partial or total cystectomy, cystenterostomy, and external drainage have been suggested as surgical treatment options (5, 11). Prophylactic splenectomy may not be necessary for all patients with sinistral portal hypertension.

CONCLUSION

Pancreatic hydatid cysts may be confused with other pancreatic cysts. Endemic locations should be kept in mind while making the diagnosis. Complications due to the pressure of the cyst may occur, and surgery should be considered as a treatment option.

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