



CASE REPORT / OLGU SUNUMU
A Rare Cause Of Ascites, Pancreatic Ascites, And Successful Treatment With
Endoscopic Transpapillary Stenting

Asitin Nadir Bir Nedeni Pankreatik Asit; Endoskopik Transpapiller Stent İle Başarılı
Tedavisi

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ABSTRACT

Pancreatic ascites is one of the rare cause of ascites. It usually occurs due to a complication of chronic pancreatitis, pancreatic trauma, or damage to the ducts during surgical procedures. There are case reports in the literature about the treatment of pancreatic ascites and different approaches have been reported. The main recommended methods of treatment for pancreatic ascites are conservative

management, transpapillary stenting, and surgery. In this report, we describe a case with pancreatic ascites that treated successfully with endoscopic transpapillary stenting.

Keywords: Ascites, Endoscopic retrograde cholangiopancreatography, Pancreatic ascites, Pancreatitis

ÖZ

Pankreatik asit nadir bir asit nedenidir. Genellikle kronik pankreatitin bir komplikasyonu, pankreatik travma veya cerrahi sırasında pankreatik kanallarda hasarlanma sonucu oluşur. Pankreatik asit tedavisi ile ilgili literatürde olgu sunumları mevcuttur ve farklı yaklaşımlar bildirilmiştir. Pankreatik asitin tedavisinde başlıca önerilen yöntemler konservatif

tedavi, transpapiller stent yerleştirilmesi ve cerrahidir. Bu bildiriye Pankreatik asiti olan ve endoskopik transpapiller stent yerleştirilmesi ile başarılı bir şekilde tedavi edilen bir olgu sunduk.

Anahtar sözcükler: Asit, Endoskopik retrograd kolanjiyopankreatografi, Pankreatik asit, Pankreatit

INTRODUCTION

Ascites is defined as the excessive accumulation of fluid in the abdominal cavity. At the more than 80% of patients with ascites the cause is liver cirrhosis.¹ Other common causes are portal hypertension, malignancy, heart failure, infections such as tuberculosis, and kidney diseases such as nephrotic syndrome.¹ Pancreatic ascites is one of the rare cause of ascites.^{2, 3} It usually occurs due to a complication of chronic pancreatitis, pancreatic trauma, or damage to the ducts during surgical procedures.^{2, 3} In this report, we describe a case with pancreatic ascites that treated successfully with endoscopic transpapillary stenting.

CASE REPORT

An 86-year-old female patient presented with a two months history of abdominal distention. Sonography revealed large amount of free fluid in the abdomen. Liver, spleen, and pancreas were normal. The patient was hospitalized to investigate the etiology of fluid in the abdomen. Her past medical history included type 2 diabetes and she had been using only insulin. She was not using any other drug or alcohol. Abdominal examination revealed findings of ascites. Her laboratory values were as follows: creatinine 1.3 mg/dl, amylase 637 U/L (20-160), lipase 53 U/L (8-78), C-reactive protein 82 mg/L (0-5). Complete blood count, thyroid stimulating hormone, aspartate transaminase, alanine transaminase, bilirubin, urine, and other laboratory tests were normal. Echocardiography and clinical evaluation revealed no signs of heart



failure. Abdominal computed tomography revealed free fluid at the perihepatic area, perisplenic area, and the midline of the abdomen (**Figure 1**). The macroscopic appearance of the ascitic fluid was red-colored and slightly turbid (**Figure 2**). Biochemical analysis results of ascitic fluid were as follows: amylase >6554 U/L (normally less than half of the serum amylase value) and serum ascites albumin gradient 0.9 g/dL. Ascitic fluid culture was negative and the cytology was benign. The level of adenosine deaminase in the ascitic fluid was normal. The patient hadn't chronic alcohol use, no previous hospitalization for pancreatitis, but had intermittent abdominal pain and dyspeptic symptoms suggesting chronic pancreatitis. Serum lipase levels were normal in the follow-up period and serum amylase levels were continuously high at 300-400 U/L levels. Our patient with pancreatic ascites underwent conservative medical treatment including total parenteral nutrition, octreotide, and diuretic. The amount of ascites and complaints did not change. Persistent high levels of amylase suggested internal pancreatic fistula. The patient was consulted with gastroenterologist and endoscopic retrograde cholangiopancreatography (ERCP) was performed. In ERCP, the duodenal papilla was fibrotic, biliary sphincterotomy was performed, the pancreatic duct was imaged but no major pancreatic leakage was observed. Pancreatic sphincterotomy was performed considering the clinical status of the patient. A plastic stent was inserted into the pancreas duct, extending to the tail. At the clinical follow-up of the patient, serum amylase levels decreased to 170 U/L and the amount of ascites decreased. Patient was discharged with regression of her initial complaints. The final diagnosis was pancreatic ascites secondary to the chronic pancreatitis.



Figure 1: Abdominal CT scan demonstrates free peritoneal fluid.



Figure 2: Macroscopic appearance of the pancreatic ascites.

DISCUSSION

Diagnosis of the disease causing ascites is important in terms of determining the treatment method. Pancreatic ascites is one of the rare cause of ascites.^{2, 3} It is usually caused by pancreatic fluid passing into the peritoneal cavity as a result of damage in the pancreatic ducts. The amylase level of pancreatic ascites is generally higher than 1000 U/L and the serum-ascites albumin gradient is below 1.1 g/dL. The most common cause of pancreatic ascites is chronic pancreatitis with approximately 80% and occurs in approximately 4% of patients with chronic pancreatitis.^{2,3} It may also develop after acute pancreatitis, trauma, and pancreatic/peripancreatic surgery.^{2,3}

The main recommended methods of treatment for pancreatic ascites are conservative management, transpapillary stenting, and surgery.³⁻⁵ In the first stage of treatment, oral nutrition is discontinued and total parenteral nutrition is recommended. This may reduce pancreatic exocrine secretions and ascites. In addition, somatostatin or octreotide treatment can also be used to reduce pancreatic secretions. ERCP is also recommended to detect leakage from pancreatic ducts in patients.³⁻⁵ Stenting of the pancreatic ducts can also be performed when necessary with ERCP. Surgical management may be required in patients who do not respond to medical treatment. However, the mortality rate of surgical interventions may be high. Surgical managements are consisting of partial pancreatic resection, cystogastrostomy, or cystojejunostomy.^{4,5}

In patients with pancreatic ascites, ERCP can be used both for the detection of pancreatic fistula and for treatment. In our case, pancreatic fistula could not be demonstrated in ERCP. However, this does not rule out the pancreatic fistula. Failure to find the fistulas may result from inadequate contrast agent and the location of fistula. Bracher et al. reported that transpapillary pancreatic duct stent was placed in the treatment of 8 patients with pancreatic



ascites.⁶ In this case series, pancreatic ascites resolved in 7 of 8 patients.⁶ Shaikh et al. and Karlapudi et al. reported the treatment of two pancreatic ascites cases secondary to chronic pancreatitis.^{7, 8} Both cases were successfully managed with endoscopic transpapillary stenting.^{7, 8} In our case, it was successfully treated with a similar method. Surgical treatment was performed in another pediatric case of pancreatic acid secondary to chronic pancreatitis.⁹ In conclusions, chronic pancreatitis may rarely cause pancreatic ascites. It should be kept in mind that the etiology of ascites may also be pancreatic ascites. In addition, endoscopic transpapillary stenting is an alternative treatment option to surgical treatment in the patients with pancreatic ascites.

Conflict of Interests: The authors declare no conflict of interests.

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