Autosomal dominant polycystic kidney disease (ADPKD) is the most frequent inherited poly-cystic disease characterized by multiple cysts in kidneys and other organs. Cysts are usually observed in both kidneys which can be in variable size and scattered out by renal cortex and medulla. Cysts can also be seen in liver, spleen, pancreas and other organs. In autopsy series, the prevalence of pancreatic cysts in patients with ADPKD is about 10%. It has been a few case reports showed that, pancreatic cysts are rare causes of chronic pancreatitis in ADPKD patients. Herein we report a patient previously diagnosed for ADPKD presenting with acute pancreatitis and no cyst in pancreas.

**Key Words:** Polycystic kidney, autosomal dominant; pancreatitis, acute necrotizing; computed tomography

**ABSTRACT** Autosomal dominant polycystic kidney disease (ADPKD) is the most frequent inherited poly-cystic disease characterized by multiple cysts in kidneys and other organs. Cysts are usually observed in both kidneys which can be in variable size and scattered out by renal cortex and medulla. Cysts can also be seen in liver, spleen, pancreas and other organs. In autopsy series, the prevalence of pancreatic cysts in patients with ADPKD is about 10%. It has been a few case reports showed that, pancreatic cysts are rare causes of chronic pancreatitis in ADPKD patients. Herein we report a patient previously diagnosed for ADPKD presenting with acute pancreatitis and no cyst in pancreas.


**Anahtar Kelimeler:** Polikistik börek, otozomal baskın; pankreatit, akut nekrotizan, bilgisayarlı tomografi

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**Acute Pancreatitis in Polycystic Kidney Disease: Possible Etiologic Factor?**

**Case Report**

Polikistik Böbrek Hastalığından Akut Pankreatit Gelişimi: Olsa Etiyolojik Neden?
of pancreatic cysts in patients with ADPKD is about 10%. It has been reported that, pancreatic cysts are rare causes of chronic pancreatitis in ADPKD patients.2 Herein we report a patient previously diagnosed for ADPKD presenting with acute pancreatitis and no cyst in pancreas.

**CASE REPORT**

A 34-year-old woman was admitted with acute epigastric pain and vomiting. She had been suffering from this pain for 2 days. Autosomal dominant polycystic kidney disease (ADPKD) had been diagnosed at the age of 24 on systemic familial screening. Physical examination revealed normal vital signs and there had been no abnormal finding except an epigastric tenderness. She had mild hypertension which was treated by perindopril. She was not taking any other drugs, and had no history of abdominal injury, gallstones or chronic alcohol intake. A mild leukocytosis (12,000/mm³) and elevated serum amylase (ranging between 3 and 4 times the upper limit of normal value) and lipase (ranging between 5 and 8 times the upper limit of normal value) and urinary amylase (ranging between 2 and 3 times the upper limit of normal value) were the only abnormal laboratory findings. Informed consent was obtained before computed tomography (CT) and ultrasonography (US) examination. Abdominal ultrasound showed enlarged kidneys including multiple cysts (Figure 1). The pancreatic tail was edematous and surrounded by peripancreatic fluid neighboring the largest cyst of the left kidney in ultrasound and CT (Figure 2). The left peri-pararenal fluid collection may reflect a possibility of a cyst rupture located at the middle port of left kidney. No gallstone or cholecodolithiasis was seen. Abdominal CT ruled out pancreatic calcifications or biliary tract abnormalities. Endoscopic retrograde cholangiopancreatography was normal.

The final diagnosis was acute pancreatitis and there was not any etiologic factor. Hospitalisation outcome was uneventful and there was not any complication improve. After six months follow up the patient remained asymptomatic and there has been no evidence of pancreatitis periodic laboratory tests and ultrasonographic examination.

**DISCUSSION**

ADPKD is inherited autosomal dominantly and may have a subtle clinical course. Because the disease is usually asymptomatic and has a slow progression, diagnosis delays until the early and middle adult life.1 Ultrasoundography is the most important diagnostic imaging method and Ravine criteria are practically applied. CT and magnetic resonance imaging methods are much more useful in complicated cases and extrarenal involvement The disease may lead to chronic renal failure and
hypertension. Most of the cases suffer from flank or back pain. Pain is mostly related to the compression of the enlarged kidney and liver. Infection or hemorrhage of cysts and nephrolithiasis are the other causes of the acute severe pain. In our case, pain was caused by acute pancreatitis which is a rare extrarenal complication of polycystic renal disease. Although serum amylase levels may increase in renal pathologies, it can never reach to the level of acute pancreatitis. Taken together, high serum amylase-lipase levels and radiological findings, the patient was diagnosed for acute pancreatitis.

All causes of pancreatitis were ruled out appropriately. There was no history of alcohol, drug and herbal medicine, surgery, trauma. Furthermore we ruled out hyperlipidemia and hypercalcemia, biliary stone, and structural abnormalities of the common bile duct.

The possible reason of acute pancreatitis in ADPKD patients is the obstruction of the pancreatic canal by a pancreatic cyst. Another etiologic factor is the division of pancreas. No cyst in the pancreatic parenchyma and any abnormality in the pancreatic duct in ERCP was observed in our patient. The rupture of a renal cyst causing a chymic reaction in the pancreatic tissue was the most plausible reason of acute pancreatitis. Irregularity and para-renal extension of a cyst which is located in upper pole of left kidney may support our argument.

In conclusion, in an ADPKD patient presenting by acute abdominal pain, acute pancreatitis should be considered in the differential diagnosis. Although pancreatic cysts and pancreatic division were the common causes of pancreatitis reported previously, herein we speculated rupture of renal cyst as an etiological factor in pathogenesis of pancreatitis in a patient with ADPKD.

REFERENCES