

## Massive gastrointestinal bleeding after acute pancreatitis: Report of a case

### Akut pankreatiti takiben abondan gastrointestinal sistem kanaması: Olgu sunumu

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A 61-year-old female patient presented to emergency with gradually increasing lower gastrointestinal bleeding. Her symptoms had started two months before hospitalization with back pain. She had a palpable mass on the left upper abdomen. In digital subtraction angiography, a fusiform aneurysmatic dilatation was seen on the distal splenic artery coiling, and glue injection was performed. On laparotomy, it was seen that the cystic mass was connected to the colonic mucosa with an opening 2 cm in width. Resection of the colon segment and necrotic cyst wall, end-to-end colonic anastomosis and debridement were undertaken. Postoperative follow-up was uneventful until the 17<sup>th</sup> day, when pancreatic drainage from the previous drain site was observed. As the amount of drainage from the fistula did not decrease, a second endoscopic retrograde cholangiopancreatography with naso-pancreatic stent placement was performed. The fistula closed 47 days after the surgery. Examination of the pathology specimen revealed non-neoplastic cystic wall with necrosis, fibrosis and fistula tract between the colon and the cyst. It should be kept in mind that acute pancreatitis affects neighboring organs and vascular structures, causing low gastrointestinal system bleeding.

**Keywords:** Pancreatitis, pancreatic pseudocyst, gastrointestinal hemorrhage

### INTRODUCTION

Visceral artery aneurysms are most commonly encountered in the splenic artery (60%), although the overall rate in the population is quite low (1%). These are usually pseudoaneurysms and are seen after chronic or acute pancreatitis and pancreas surgery. Splenic pseudoaneurysms can be mortal. They present with left upper quadrant and back pain. Incidence of rupture is less than 2% in asymptomatic splenic pseudoaneurysms, while this rate is higher in symptomatic counterparts (1,2). To prevent rupture, endovascular coiling or surgical interventions can be utilized.

After acute pancreatitis, pancreatic pseudocyst can form in four weeks. If the pseudocyst becomes infected, necrosis may occur and colonic or other neighboring organ fistulizations might ensue (3,4). Although rare, infection and cyst impingement might cause bleeding of surrounding arteries into the pseudocyst (5).

Both splenic artery aneurysm and colonic fistula are rare complications of pancreatitis. In this article, we present a case with simultaneous occurrence of both complications associated with lower gastrointestinal bleeding, which is even rarer.

61 yaşında kadın olgu alt gastrointestinal sistem kanaması nedeniyle acil servise başvurdu. Şikayetleri iki ay önce sırta ağrı şeklinde başlamıştı. Sol üst kadranda ele gelen kitle tespit edildi. Anjiyografide splenik arter distalinde anevrizma olgusu görüldü ve embolizasyon uygulandı. Laparotomi yapıldığında transvers kolona 2 cm çapında ağzlaşmış kistik lezyonla karşılaşıldı. Kolon segmenti rezeke edilerek uç-uca anastomoz yapıldı. Postoperatif 17. gün dren bölgesinden pankreatik sıvı gelmeye başladı. Drenaj miktarının azalmaması üzerine, endoskopik retrograd kolanjiopankreatografi yapılarak nazo-pankreatik kateter yerleştirildi. Postoperatif 47. gün fistül bölgesinden akıntı kesildi. Patolojide nekroz içeren non- neoplastik kist, kolon ve kist arasında fibrozis bulguları vardı. Akut pankreatit sonrası gastrointestinal sistem kanaması olan olgularda, pankreas, vasküler yapılar ve komşu organlar arasında fistül akılda bulundurulmalıdır.

**Anahtar kelimeler:** Pankreatit, pankreatik psödokist, gastrointestinal kanama

### CASE REPORT

A 61-year-old female patient presented to emergency with gradually increasing lower gastrointestinal bleeding. Her symptoms started two months before hospitalization with back pain. A computerized tomography (CT) done at that time in another center showed a mass anterior to the pancreas, between the colon and stomach. Her past medical history was significant for a cholecystectomy six years ago. In her physical examination, she had hematochezia and tenderness on the abdomen. Rectal examination did not reveal any mass.

The initial laboratory work-up showed a leukocyte count of 17,500/mm<sup>3</sup> and hemoglobin of 7.6 g/dl. After admission, the patient received 4 units of packed red cell transfusions. Upper gastrointestinal endoscopy did not reveal any pathological findings. The patient underwent colonoscopy twice, but secondary to massive bleeding, colon segments proximal to the splenic flexure could not be visualized. CT showed fluid in the lesser sac and pelvis, intramural air in the colonic wall on the left side and inflammatory changes around the stomach, pancreas and colon (Figure 1). In digital subtraction angiography, a fusiform aneurysmatic dilatation was seen on

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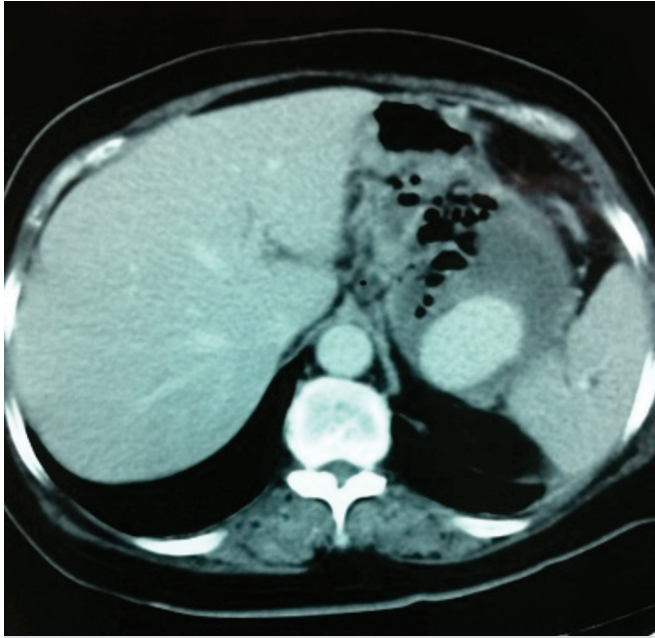


Figure 1. Pseudocyst containing intravenous contrast.

the distal splenic artery (Figure 2). On the third day after admission, splenic artery coiling and glue injection were performed.

During the follow-up in the hospital, the bleeding stopped and the patient was hemodynamically stable, but her abdominal pain, fever and leukocytosis persisted. She then had a palpable mass on the left upper abdomen. Laparotomy was decided, and the exploration revealed a 10x15 cm cystic mass originating from the pancreatic body lying between the stomach, spleen and posterior colonic wall. The cyst contained a foul-smelling mixture of abscess, hematoma and necrotic material. On further dissection, it was seen that the cystic mass was connected to the colonic mucosa with a 2 cm wide opening. Resection of the colon segment and necrotic cyst wall, end-to-end colonic anastomosis and debridement were undertaken.

Postoperative follow-up was uneventful until the 17<sup>th</sup> day, when pancreatic juice was observed to ooze from the previous drain site. Endoscopic retrograde cholangiopancreatography (ERCP) with sphincterotomy was performed with the diagnosis of pancreatic fistula (Figure 3). In ERCP, there was a leakage from the tail of the pancreas. As the amount of drainage from the fistula did not decrease, a second ERCP with nasopancreatic stent placement was performed. The fistula closed 47 days after the surgery. She did not have any additional problems thereafter.

Examination of the pathology specimen revealed non-neoplastic cystic wall with necrosis, fibrosis and fistula tract between the colon and cyst.

## DISCUSSION

Colonic complications of acute pancreatitis are rare, but when present, they increase morbidity and mortality (4). Colonic fistulization can happen between the 10<sup>th</sup> and 90<sup>th</sup> days after acute pancreatitis (3). In various studies, colonic complications and fistula rates are cited as between 15-27% and 3-10%, respectively (6).



Figure 2. Fusiform aneurysmatic dilatation on digital subtraction angiography.

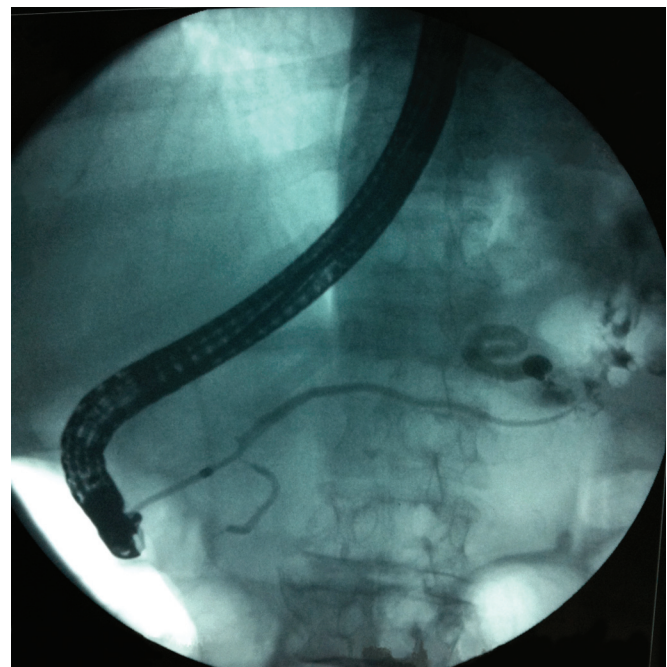


Figure 3. Postoperative pancreatic fistula in endoscopic retrograde cholangiopancreatography.

CT and colonoscopy are the two most commonly used imaging modalities for colonic complications of acute pancreatitis, while ERCP is the most useful diagnostic and therapeutic tool in management of pancreatico-colonic fistula, enabling placement of an internal stent or nasobiliary drainage, as in our case (7,8).

Proteolytic destruction of surrounding tissues by pancreatic enzymes plays a role in the pathogenesis of pseudoaneurysm formation. Embolization in visceral artery aneurysms can be life-saving. This intervention can stop bleeding or be used as a bridging therapy until definitive surgery. The success of radiological embolization is cited as 90-95% (9-11). Mortality of bleeding pseudoaneurysms after pancreatitis ranges between

20% and 50% (12). Embolization reduces this risk to 6%. Embolization can lead to infarction of the organ that the artery is supplying in 30% of cases (13). In our case, surgery was undertaken after bleeding was stopped with embolization of the splenic artery pseudoaneurysm. A small area of the spleen was infarcted secondary to the embolization procedure, but this was quite insignificant.

Massive lower gastrointestinal bleeding is quite rare after acute pancreatitis, although this can be seen after invasion of the gastrointestinal tract by pancreatic tumors (14,15). The unique presentation of our case once again shows that acute pancreatitis affects neighboring organs and vascular structures, causing unexpected complications.

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