

# Large bowel obstruction as an unusual presentation of pancreatic carcinoma

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## Abstract

**Background:** Large bowel obstruction due to pancreatic tail carcinoma is extremely rare. Case report: We present a case of large bowel obstruction and cecal perforation due to carcinoma of the tail of the pancreas.

**Conclusion:** Despite of the poor prognosis of the cases reported so far, our patient is alive and disease free 12 months after emergent aggressive surgical therapy and adjuvant therapy.

**Keywords:** pancreatic cancer, large bowel obstruction

## Introduction

Large bowel obstruction is an unusual presentation of cancer of the pancreatic tail. Large bowel obstruction is a common surgical emergency. Common causes of large bowel obstruction are volvulus, diverticulitis, colorectal cancer and pelvic malignancies [1]. Large bowel obstruction due to pancreatic cancer is extremely rare despite the close anatomical relationship between the pancreatic tail and left colonic flexure. Only six relevant cases have been reported so far [2-6].

## Case presentation

A 61 year-old male presented to the emergency department with abdominal distention and diffuse abdominal pain. He had persisting vomiting and nausea the last 10 hours. He hadn't pass any stools or winds since the day before. He reported colicky pain and worsening constipation for the last 15 days. He had no other comorbidities and no previous laparotomies. Clinically, the patient's abdomen had signs of diffuse peritonitis, he was hypotensive and suffered from acute renal failure. His inflammatory markers were raised. Abdominal x-ray revealed large bowel obstruction with an abrupt cut-off at the splenic flexure while the chest x-ray revealed free sub-diaphragmatic air.

After initial resuscitation, the patient underwent an emergent exploratory laparotomy. We encountered notably distended small and large bowel up to the splenic flexure and fecal peritonitis due to cecal perforation. A large mass was involving the tail of the pancreas, the splenic hilum and the splenic flexure causing total obstruction. We performed an extended right colectomy en block with distal pancreatectomy and splenectomy. Primary anastomosis was avoided so an end ileostomy was fashioned. Postoperatively, he suffered from a Clavien-Dindo II complication. He was discharged on the postoperative

day 14.

The histopathology examination revealed a moderately differentiated pancreatic ductal adenocarcinoma with perineural infiltration pT3N1. No distant metastases were found following staging of the disease. The patient was treated with adjuvant chemo-radiotherapy. He is alive 12 months postoperatively and in his recent follow-up there is no sign of locoregional or distant recurrence.

## Discussion

Pancreatic carcinoma usually appears in the head of the pancreas and typically presents with weight loss and painless jaundice. Carcinoma of the tail of the pancreas is rarely symptomatic in early stages and presents as weight loss or indistinct abdominal pain [7]. Over 50% of the pancreatic tail carcinomas are stage IV at diagnosis.

Pancreatic tail carcinoma presenting as large bowel obstruction and perforation is extremely rare. In our review of the existing literature (Table 1) there are six published case reports so far [2-6]. All patients but one were male and mean age was 67.14 (48-92). All patients presented as emergencies and in four cases coexisted bowel perforation. Most of the patients underwent an urgent laparotomy. In two cases the patients had a damage control operation initially followed by definitive operation later. Four of the patients, including ours, underwent a definitive laparotomy where extended pancreatic resection was performed. Most of the patients had a stoma formation instead of an anastomosis. One patient received only best supportive care. Prognosis is very poor. All six patients passed away within days to months from the surgery. This might be due to the significant morbidity and mortality of an urgent complex operation or might represent an aggressive behavior of the cancer [5]. Some authors imply that the treatment has palliative intent. Our patient is the only one who is still alive and disease-

free 12 months postoperatively.

Case reports	Welch, 1979 [2]	Tresarden, 1985 [3]	Slam et al, 2007 [4]	Griffin et al, 2012 [5]	Bang- Nielsen et al, 2018 [6]	Present case
<b>Gender</b>	M	M	M	M	M / F	M
<b>Age</b>	54	64	78	73	48 / 92	61
<b>Presentation</b>	Abdominal pain, constipation, weight loss	Lower abdominal pain, constipation, diarrhea, obstructive jaundice	Abdominal pain, distention, nausea	Abdominal pain, distention, vomiting, constipation, weight loss	Diffuse abdominal pain, intermittent vomitus, dizziness/  Progressively distended abdomen during one day	Abdominal distention, diffuse abdominal pain, vomiting
<b>Colon perforation</b>	No	Yes	Yes	Yes	No both cases	Yes
<b>Primary tumor</b>	Tail of pancreas	Head of pancreas	Tail of pancreas	Tail of pancreas	Tail of pancreas both cases	Tail of pancreas
<b>Point of invasion</b>	Splenic flexure	Right transverse colon	Splenic flexure	Splenic flexure	Splenic flexure both cases	Splenic flexure
<b>Pathology</b>	Adenocarcinoma	Adenocarcinoma	Mucinous adenocarcinoma	Mucinous adenocarcinoma	Adenocarcinoma both cases	Adenocarcinoma
Case reports	Welch, 1979 [2]	Tresarden, 1985 [3]	Slam et al, 2007 [4]	Griffin et al, 2012 [5]	Bang- Nielsen et al, 2018 [6]	Present case
<b>Procedure</b>	Emergency decompression-transverse colectomy, Reoperation: segmental colon resection-pancreatic cancer unresectable	Non operative treatment	Right hemicolectomy- primary anastomosis  Reoperation : En block resection of the pancreatic tail, spleen and left colon with primary anastomosis	Distal pancreatectomy, splenectomy, subtotal colectomy  Reoperation: ileostomy formation	Left hemicolectomy, distal pancreatectomy, splenectomy, transverse colectomy, sigmoid fistula / Total colectomy, distal pancreatectomy, splenectomy	Extended right colectomy en block with distal pancreatectomy and splenectomy- end ileostomy
<b>Outcome</b>	Died “several months later”	Died “hours later”	Survival at 3 month follow-up	Died 17 days later	Died 16 days postop / Died 2 months later	Alive and disease-free 12 months postop

**Table 1.** Literature review of pancreatic cancer cases presenting with large bowel obstruction.

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