FATAL ABDOMINAL COMPARTMENT SYNDROME

A RARE COMPLICATION FOLLOWING ERCP

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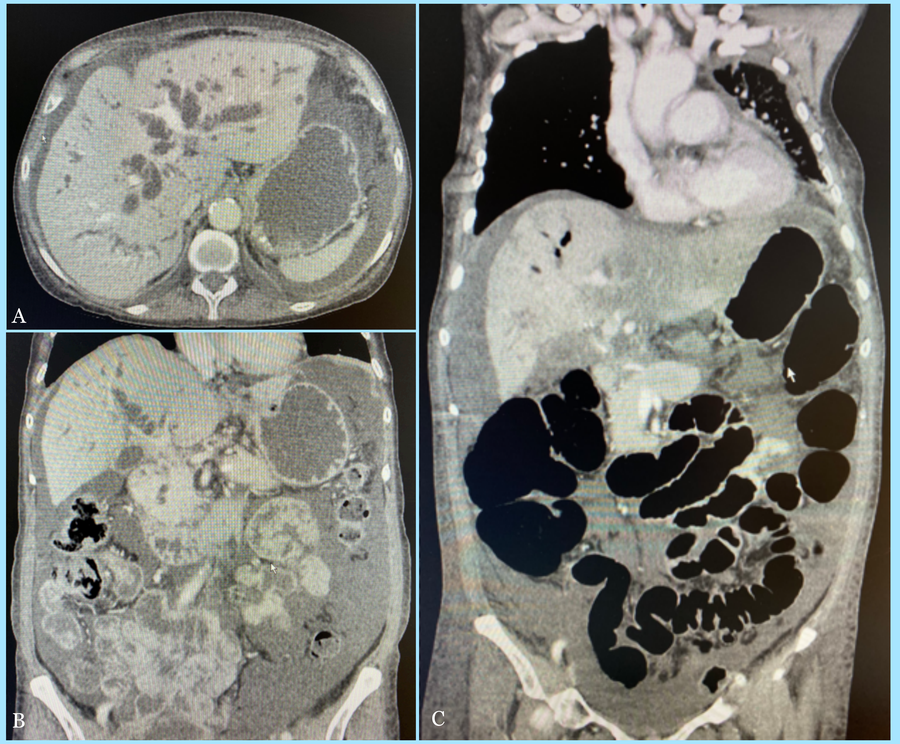
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BACKGROUND

Endoscopic retrograde cholangiopancreatography (ERCP) is known to be a technically complex procedure and adverse effects are more common than in other endoscopy procedures. Abdominal compartment syndrome (ACS) is an uncommon complication of ERCP. We report a case of fulminant fatal ACS after ERCP due to large-volume ascites in a critically ill patient.

CASE PRESENTATION

A 73-year-old woman of Greenlandic origin was referred to our hospital with a history of jaundice, significant weight loss, and non-specific abdominal symptoms. Computer tomography (CT) revealed a near-hilar stricture of the biliary tree with intrahepatic cholestasis (classified as Klatskin tumor type 3A) along with ascites, peritoneal carcinomatosis, and an ovarian mass suspicious for ovarian cancer. The patient underwent a technically challenging ERCP. Unfortunately, it was not possible to decompress the stricture of the biliary tree, despite multiple attempts including endoscopic dilation and use of both plastic and metal stents. Biliary brush cytology was collected and the procedure was concluded with a follow-up plan for percutaneous biliary drainage. The patient's condition deteriorated immediately post-operatively. Urgent CT while the patient remained intubated revealed massive ascites, dilated intestinal loops, and displaced endotracheal tube with resulting atelectasis of the left lung. There were no signs of complications directly related to endoscopy. Immediate surgical decompression and intestinal desufflation through enterotomy were performed. Nearly 5 liters of ascites were drained and peritoneal specimens were obtained. The patient was transferred to ICU, where her condition remained stable. Due to disseminated neoplastic changes with very poor prognosis, no further active treatment was initiated. The patient passed away shortly after. Histopathology of peritoneal specimens confirmed the diagnosis of disseminated ovarian cancer. Biliary brush cytology was negative.





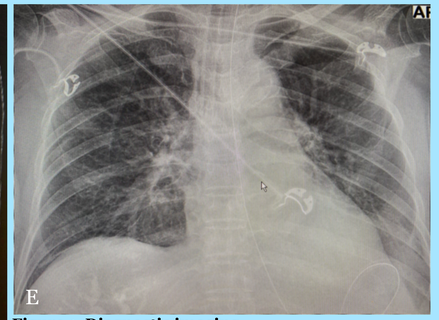


Figure 1. Diagnostic imaging.
A + B: near-hilar stricture of the biliary tree with intrahepatic cholestasis (classified as Klatskin tumor type 3A) along with ascites, peritoneal carcinomatosis, and an ovarian mass suspicious for ovarian cancer
C: massive ascites, dilated intestinal loops, and displaced endotracheal tube with resulting atelectasis of the left lung
D: dilated intestinal loops
E: Chest X-ray after adjustment of ET tube showing resolving atelectasis.

KEY LEANING POINTS

- **Compartment syndrome is a very rare complication of ERCP.**
- **To our knowledge, only 2 other cases of ACS after ERCP have been described, both related to bile duct perforation and retroperitoneal hemorrhage.**
- **In our case, ACS was secondary to a challenging and prolonged procedure combined with massive ascites and anesthetic complications.**
- **We suggest that paracentesis should be considered prior to ERCP in patients with massive ascites.**