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Abdominal compartment syndrome secondary to acute necrotizing pancreatitis

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Key words: Abdominal compartment syndrome. Acute pancreatitis. Decompression. Intra-abdominal pressure. Intra-abdominal hypertension. Necrotizing pancreatitis. Surgery.

Dear Editor,

Severe acute pancreatitis occurs in around 20% of patients and is associated with mortality rates between 8-40%. Abdominal compartment syndrome is a fatal complication that is associated with new organ failure or acute worsening of existing organ failure and has an associated mortality of around 60%. Intra-abdominal pressure measurements are recommended in patients with risk factors for intra-abdominal hypertension or abdominal compartment syndrome. Management should be based on a step-up method and surgical intervention may be indicated when conservative treatment fails.

Case report

A 60-year-old man with a history of multiple episodes of mild acute gallstone pancreatitis was hospitalized due to a new episode of a suspected biliary origin. The patient was admitted to the Intensive Care Unit after eight days due to a deterioration in his condition. This included acute oliguric renal failure, leukocytosis of 19,940/mm^3, metabolic acidosis (pH 7.3, base excess -4 mmol/l, bicarbonate 21.6 mmol/l), lactate at

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2.2 mmol/l and creatinine at 2.1 mg/dl.

Seven days later, the disease progressed to necrotizing pancreatitis with diffuse extra-pancreatic necrosis. Percutaneous drainage of the largest necrotic collection was performed; the patient's response during the following days was unsatisfactory based on computed tomography (CT) results. A progressive worsening occurred with multi-organ dysfunction and hemodynamic instability (hemoglobin 6.8 mg/dl, pH 7.1, lactate 13.2 mmol/l) and a sustained intra-abdominal pressure of 21-22 mmHg. An urgent CT scan (Fig. 1) showed diffuse pancreatic necrosis, several collections with acute hemorrhage that reached the omental transcavity and associated gastric and liver compression with visceral infarctions.

An emergency decompressive laparotomy was performed with a compressive hematoma evacuation and necrosectomy including the majority of the pancreatic parenchyma. The disease progressed further with refractory multi-organ dysfunction and septic shock, and the patient died 20 days after the initial admission.

Discussion

Severe acute pancreatitis occurs in 20% of patients and is a risk factor for abdominal compartment syndrome (ACS) (1). ACS is a serious complication of acute pancreatitis associated with a mortality rate of around 60%. ACS is defined as a sustained intra-abdominal hypertension (HIA) (pressure over 20 mmHg) that is associated with new onset organ failure or acute worsening of existing organ dysfunction (3). HIA usually occurs within the first week after diagnosis of severe acute pancreatitis (1). Routine pressure measurements are recommended when any known risk factor for IAH or ACS is present, with a management approach based on a step-up method (3). Emergency surgery should be performed when conservative treatment fails.

References

1. Van Brunschot S, Schut AJ, Bouwense SA, et al. Abdominal compartment syndrome in acute pancreatitis: A systematic review. Pancreas 2014;43:665-74. DOI: 10.1097/MPA.0000000000000108

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2. Smit M, Buddingh KT, Bosma B, et al. Abdominal compartment syndrome and intra-abdominal ischemia in patients with severe acute pancreatitis. World J Surg 2016;40:1454-61. DOI: 10.1007/s00268-015-3388-7

3. Kirkpatrick AW, Roberts DJ, De Waele J, et al. Intra-abdominal hypertension and the abdominal compartment syndrome: Updated consensus definitions and clinical practice guidelines from the World Society of the Abdominal Compartment Syndrome. Intensive Care Med 2013;39:1190-206. DOI: 10.1007/s00134-013-2906-z

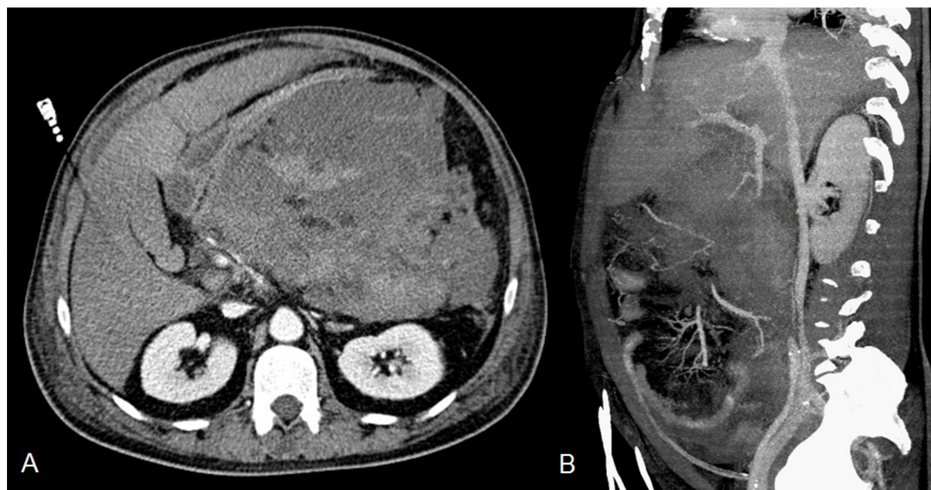

Fig. 1. Abdominal CT scan. A. Extra-pancreatic and acute hemorrhagic collections, gastric compression and collapse, severe hepatic artery stenosis and splenic parenchymal and left liver lobe hypodensities (visceral infarctions). B. Loss of normal pancreatic anatomy and inflammation containing the arterial tree and porto-spleno-mesenteric venous trunk.

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