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Letters to the Editor

Therapeutic management of emphysematous pancreatitis

Key words: Esophageal achalasia. Squamous cell carcinoma. Risk factor.

Dear Editor,

Emphysematous pancreatitis is a rare and life-threatening disease, with high morbidity and mortality, which is presented as acute pancreatitis intraparenchym gas at the time of diagnosis.

We report a case of emphysematous pancreatitis treated with early surgery and critical care with good results.

Case report

An 81-year-old man was admitted to the hospital with progressively worsening abdominal pain initiated in epigastrium and extended to both sides accompanied by vomiting of several days duration. His past medical history included hypertension, dyslipidemia, ischemic heart disease, moderate aortic stenosis, depression, cataracts and prostatism. No toxic habits or previous abdominal surgery. In the laboratory studies highlighted an amylase of 3,500 U/L. Computed tomography (CT) scan showed gas in abdominal retroperitoneum and peritoneum perihilum with pancreatic exudates (Fig. 1).

Given the progressive clinical deterioration and suspected diagnosis of emphysematous pancreatitis was decided emergency surgery after antibiotic prophylaxis (piperacillin-tazobactam),

Fig. 1. Oblique CT scan of the abdomen showing gas in the body and tail of the pancreas (thick arrow) and the hepatic hilum (thin arrow).

making superficial necrosectomy, lavage, placement of soft drains for continuous lavage for postoperative, nasojejunal tube and obtaining samples for culture.

He was taken to the resuscitation unit on mechanical ventilation and hemodynamic instability despite aggressive fluid resuscitation and noradrenaline to 0.9 $g.kg^{-1}.min^{-1}$, with acute renal failure, respiratory acidosis, coagulopathy, fever, acute respiratory distress syndrome, presenting an APACHE II of 37 (mortality 92.7%) and procalcitonin > 10 ng/ml.

Empirical antibiotic therapy was continued with cefepime, metronidazole and ampicillin and aggressive fluid therapy, inotropes, corticosteroids, peritoneal lavages, introducing nasoje-

junal enteral feeding tube early.

Given the persistence of fever and leukocytosis was decided a change of scheduled antibiotic meropenem, levofloxacin, vancomycin and metronidazole, while awaiting the culture results.

Cultures taking during the surgery grew *Escherichia coli, Klebsiella pneumophila, Clostridium perfringens* and *Fusobacterium*. Coverage was added with antifungal voriconazol by isolation of *Aspergillus fumigatus* in bronchial aspirate.

The evolution of the patient was favorable, stopping requiring mechanical ventilation and progressive amines' suppression.

CT scan was repeated due to a further deterioration, showing subhepatic collection and extension of right posterior pararenal collection to iliopsoas muscle. CT-guided fine needle aspiration (FNA) of subhepatic collection was performed obtaining pus with negative cultures and may be discharged home after two months.

Discussion

Before of diagnosis of acute pancreatitis, an assessment should be performed depending on the severity of clinical data and scoring systems such as Acute Physiology And Chronic Health Evaluation (APACHE II) or Ranson's criteria.

The APACHE II system is as accurate at 24 hours of evolution as can be other systems at 48 hours and therefore is considered the best system for assessing severity (1). 10% to 30% of patients with acute pancreatitis develop severe disease with necrosis (1) reaching a mortality of 40%. Mortality in infected pancreatic necrosis is almost 100% without debridement (1-3). The two main causes for the appearance of pancreatic gas are infection by Gram negative bacterial translocation from the colon and enteropancreatic fistula (4). The last option was rejected in the case presented by the rapid appearance of gas and for not having found data of the same during the surgery. It is important to diagnose necrotizing pancreatitis performing a CT scan (1,5) and obtaining samples for culture to determine if we have a sterile or infected necrosis. Bacteria most often involved are: *E. Coli* (35%), *Klebsiella pneumoniae* (24%), *Enterococcus* (24%), although others can be isolated such as C*lostridium perfringens* (1,6).

With respect to therapeutic management, guidelines emphasize the importance of vigorous fluid therapy (> 200 ml/h), oxygen and early enteral nutrition by nasojejunal tube (1). There is a lack of evidence in relation to antibiotic prophylaxis, but most authors agree with the early use of them because of the clear relation between infection and mortality. We are seeing a trend toward conservative management (antibiotics and nutritional support) in selected patients, although a case of infected necrotizing pancreatitis is chosen in most cases by surgical treatment (1,3), which in our case together with an aggressive critical care therapy, allowed a good outcome despite the high mortality present at the beginning of the disease.

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