

Acute Emphysematous Pancreatitis

M Shafi, B Singh, A Hussain, A Rashid, A Laharwal, A Khanday

Citation

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Abstract

Acute

emphysematous pancreatitis represents a rare and potentially life-threatening infection and is characterized by gas formation within or around the pancreas. We present a case of acute emphysematous pancreatitis managed conservatively.

INTRODUCTION

Acute pancreatitis (AP) is the most frequent disorder of the pancreas. It is an inflammatory process of the pancreas, with variable involvement of other regional tissues or remote organ systems. Emphysematous pancreatitis (EP) is a rare and life-threatening necrotizing infection of the pancreas (1). It is associated with gas-forming bacteria and characterized by the presence of gas within or around the pancreas (2). Computed tomography (CT) is the imaging modality of choice. It is both highly sensitive and specific in the detection of abnormal gas and is well-suited to reliably depict the anatomical location and extent of the gas (3). Though the outcome of EP is reported to be poor, there are very few reports on the clinical characteristics of EP (4). We present our experience in managing a case of acute emphysematous pancreatitis.

CASE REPORT

A 55-year-old female was admitted in the surgical emergency unit of Sri Maharaja Hari Singh hospital with complaints of upper abdominal pain for one day and multiple episodes of vomiting of the same duration. Past history revealed her being a chronic snuff user and a fall from height 1 year back with associated frontal lobe contusion. On examination, the patient was ill-looking with a pulse of 100 bpm, regular, a blood pressure of 110/70 mmHg and pallor with icterus. Abdominal examination revealed a distended abdomen with tenderness and guarding in the epigastrium and left hypochondrium. Shifting dullness was present and bowel sounds were sluggish. The patient was put on intravenous fluids and RTS started. Injectable Cefoperazone/Sulbactam and octreotide were administered.

Investigations revealed leucocytosis, deranged LFTs, a serum amylase of 1519 IU/L (ref.; 100) and a LDH of 500 IU/l (ref. <400). X-ray of the abdomen showed a lot of gaseous distention. USG revealed a bulky pancreas, hypoechoic with peri-pancreatic fluid and a thick-walled gallbladder with free fluid in the pelvis. CECT revealed massive pancreatic necrosis with gas filling almost the whole pancreas as well as the gallbladder. Based on that, a diagnosis of acute emphysematous pancreatitis was made. The patient was put on a central line and managed in an ICU. Aspiration of the pancreatic ascites was done twice to relieve the patient of abdominal compartment syndrome. The patient recovered uneventfully and was discharged after a period of 47 days in the hospital.

Figure 1

Figure 1 ct abdomen showing pancreatic gas



DISCUSSION

Emphysematous (gas-forming) infections of the gallbladder, stomach, pancreas and genitourinary system are associated with a high morbidity and mortality and are potentially life-threatening. The presence of gas within the parenchyma of solid organs or the walls of hollow viscera may be due to a variety of pathologic or benign entities. Besides infection with gas-forming bacteria such as *Escherichia coli*, *Clostridium*, *Staphylococcus*, *Streptococcus*, *Klebsiella*, *Candida* and *Pseudomonas*, other possible sources include bland tissue infarction with necrosis, enteric fistula formation, and reflux from the adjacent hollow viscus (4). Gas should be differentiated from atmospheric air introduced at recent instrumentation or surgery. Gas associated with infection is generally thought to consist of carbon dioxide and nitrogen secondary to the fermentation of glucose by some species of bacteria (4). Other clinical factors that contribute to the increased production or slowed removal of gas include a depressed cell-mediated immune response, local tissue necrosis and presence of atherosclerosis (3). For all of these patients with gas-forming infections immediate surgery is generally recommended (1).

Omezzine SJ et al. described the utility of computed tomography as the imaging modality of choice for the diagnosis of acute emphysematous pancreatitis. It is both highly sensitive and specific in the detection of abnormal gas and is well-suited to reliably depict the anatomical location and extent of the gas (3).

Wig JD et al. concluded in their study that emphysematous pancreatitis is easily diagnosed on CT scan and all patients need surgical intervention. The management of this

condition is not different from infected pancreatic necrosis (1).

Sileikis A et al. suggested that if the condition of the patient with emphysematous pancreatitis is stable, antibiotic treatment could be undertaken despite the evidence of pancreatic infection. If it is possible, fluid collection drainage could be undertaken by minimal invasive procedures. It allows a much less morbid necrosectomy or, in some cases, maybe, to avoid surgery completely (4).

Ghiridim G et al. discussed a case of emphysematous necrotizing pancreatitis who underwent laparotomy. The patient was treated successfully by extensive pancreatic necrosectomy, open packing and scheduled repeated debridements. Based on the available data and this case, early surgical debridement and appropriate antibiotics appear to be the preferred treatment (2).

Conclusion: Conservative management of acute emphysematous pancreatitis is a good treatment option if the patient's condition remains stable.

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Author Information

Muhammad Shafi, (MS)

Professor, Department of Surgery, Government Medical College, Sri Maharaja Hari Singh Hospital

Biant Singh, (MS)

Assistant Professor, Department of Surgery, Government Medical College, Sri Maharaja Hari Singh Hospital

Abid Hussain, (MBBS)

Post Graduate Scholars, Department of Surgery, Government Medical College, Sri Maharaja Hari Singh Hospital

Arshad Rashid, (MBBS)

Post Graduate Scholars, Department of Surgery, Government Medical College, Sri Maharaja Hari Singh Hospital

Asim Laharwal, (MBBS)

Post Graduate Scholars, Department of Surgery, Government Medical College, Sri Maharaja Hari Singh Hospital

Ashraf Khanday, (MS)

Registrar, Department of Surgery, Government Medical College, Sri Maharaja Hari Singh Hospital