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Acute necrotic and hemorrhagic pancreatitis leading to death: clinical insights

Abstract

Death following acute haemorrhagic pancreatitis is rare, with chronic alcoholism being a major risk factor. Acute pancreatitis can range from mild to severe, with necrotizing forms leading to multisystem organ failure. A 39-year-old male, a known alcoholic, died from severe intra-abdominal bleeding through the drainage tube, with 2000ml of blood lost in 10 minutes. The patient had infected necrosis and underwent organ-preserving necrosectomy followed by drainage-lavage. Histopathology confirmed the cause of death as acute necrotic haemorrhagic pancreatitis. This case illustrates the potential severity and rapid progression of this condition in alcoholics.

Keywords: acute, haemorrhage, pancreatitis, alcohol & sudden death

Volume 10 Issue 3 - 2025

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Received: July 21, 2025 | **Published:** August 06, 2025

Introduction

Acute haemorrhagic necrosis features parenchymal necrosis with bleeding, while acute pancreatitis involves reversible inflammation and oedema. Chronic pancreatitis causes irreversible damage. Haemorrhagic pancreatitis, a rare complication of acute cases, can lead to sepsis and organ failure. Infected pancreatic necrosis accounts for about half of pancreatitis deaths.[1,2] Haemorrhage often results from vessel erosion or pseudoaneurysm rupture. Surgical pioneers introduced laparotomy for severe cases, though early mortality exceeded 50%. Necrotizing pancreatitis remains deadly, with 25% mortality. Pathophysiological factors behind necrosis are still unclear. This report highlights the sudden death of a 39-year-old man from multi-organ failure due to alcohol-induced haemorrhagic pancreatitis.[3,4]

Case history

A 39-year-old man presented with a 7-day history of dull, progressive epigastric pain radiating to the back, accompanied by dyspnoea, following an alcohol binge. Ultrasound and CT abdomen confirmed acute oedematous pancreatitis, and he was admitted to ITU. A CT-guided pigtail drain was placed, and higher antibiotics initiated. After a sudden drop in drain output and fever, a repeat ultrasound revealed a 7x5 cm peripancreatic collection, with the drain displaced. A new pigtail was inserted under CT guidance and functioned initially but later became blocked, requiring flushing.

Subsequently, laparoscopic necrosectomy with drain placement was performed. Postoperatively, faecal discharge through the drain prompted a CT scan, revealing a faecal fistula. The patient underwent laparotomy and ileostomy formation. Later, bleeding was noted around the drain site; CT excluded pseudoaneurysm. He was transfused with 4 units packed cells and 2 units FFP over 2 days.

Two days later, massive bleeding (2000 ml in 10 minutes) into the drain occurred, causing unconsciousness. Emergency intubation, blood transfusion (5 units packed cells), and wound packing were performed. Despite aggressive resuscitation, the patient went into hypovolemic shock with unrecordable blood pressure, followed by cardiorespiratory arrest. After 2 hours of resuscitative efforts, the patient could not be revived, and death was declared.

Discussion

A 45-year-old alcoholic male died from acute haemorrhagic pancreatitis, confirmed by autopsy and histopathology showing massive necrosis, haemorrhage, and inflammation. Biliary pancreatitis is twice as severe, often requiring emergency bile duct exploration. Emergency surgery with cholecystectomy and bile duct procedures offers better outcomes than necrosectomy. Total pancreatectomy is rarely successful; near-total pancreatectomy is preferred if conservative measures fail. In a review of 61 cases, early pancreatic ischaemia and microcirculatory disturbances (e.g., vasoconstriction, coagulation, and vessel injury) were key to necrosis development. Chronic alcoholic pancreatitis may follow acute episodes, progressing over 1 to 19 years.[5] Five experimental models showed that severe acute pancreatitis involves extensive necrosis and minimal apoptosis, while mild forms show the opposite. Severity is linked to necrosis rather than apoptosis. Oedematous pancreatitis has low mortality with non-surgical care, while necrosectomy with lavage improves survival in necrotizing forms.

Fatal complications include vessel rupture and haemorrhage. Pancreatic pseudoaneurysm is rare but life-threatening. Key treatments include hydration, pain control, and nutrition. Routine antibiotics or adjuvant drugs lack proven benefit. Lung and intestine are often affected due to lymphatic spread. Alcohol and smoking are major risk factors for recurrent and chronic pancreatitis in certain patients.[6,7] This report links alcohol and smoking to necrotic haemorrhagic pancreatitis and sudden death. A chronic alcoholic appeared healthy but died from haemorrhagic pancreatic necrosis. Symptoms included abdominal pain, vomiting, bloody stools, and rapid blood loss. Alcohol and smoking are key risk factors. Mild oedematous pancreatitis is usually self-limiting with <1% mortality.[8] Post mortem diagnosis may use ancillary tests like vitreous glucose, urea, creatinine, and serum amylase/lipase, though timing affects accuracy. Imaging (CT, MRI, ultrasound) is valuable, with post mortem CT increasingly used. CT angiography shows promise, but artefacts may hinder interpretation, especially in pancreatic assessments.[9]

Conclusion

This case highlights acute haemorrhagic necrosis of the pancreas as a key differential in haemorrhagic necrotic pancreatitis. Reports

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show rising cases in known alcoholics, possibly due to true incidence increase or better awareness. Heavy alcohol use and smoking remain major risk factors for acute necrotic and haemorrhagic pancreatitis.

Acknowledgements

This study was supported by the Department of Zoology, St. Joseph University, Nagaland, India for the laboratory facilities provided.

Conflicts of interest

The authors declare that there are no conflicts of interest.

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