



# Incarcerated Inguinal Hernia or Acute Necrotizing Pancreatitis?

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## Abstract

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**BACKGROUND:** Acute pancreatitis is a common disease with multiple clinical and radiological manifestations, which sometimes might be very uncommon.

**CASE PRESENTATION:** Our case is an untypical case of extra-pancreatic complication in acute severe pancreatitis, which was misdiagnosed as incarcerated inguinal hernia on computed tomography imaging and treated surgically. It illustrates the importance of every clinical feature in acute pancreatitis and the challenge of interpreting the radiological data.

**CONCLUSION:** This case must raise awareness for a common disease with many uncommon clinical manifestations.

## Introduction

Severe acute pancreatitis often leads to pancreatic and peripancreatic collections but, rarely, it can lead to collections at sites remote from the pancreas [1], [2].

We report a case of severe acute pancreatitis manifesting a fluid collection within the inguinal canal, during the evolution of the disease, that was misdiagnosed as inguinal hernia on computed tomography (CT) imaging and who was treated surgically.

This case illustrates the complexity and severity of acute pancreatitis as well as the challenges in interpreting and relying on diagnostic radiological data. Despite the high sensitivity of CT scan in diagnosing acute pancreatitis and its complications, our case illustrates the importance of maintaining a high index of clinical suspicion in a disease with different faces.

## Case Presentation

A 46-year-old man, with a history of chronic alcohol intake, presented at the ER for the upper abdominal pain that irradiates in the back. He was

binge drinking the past month, especially during past week. He had a previous history of surgery for the right inguinal hernia repair 5 years ago. He report having prior short episodes of mild epigastric pain, which resolved spontaneously.

On the examination, he was tachycardic 110 bpm, afebrile, O<sub>2</sub> saturation on room air was 98%. On palpation, the epigastric region was painful. The laboratory findings showed high levels of lipasemia (612 UI/L) and the diagnosis of acute pancreatitis was made. The renal function impairment (urea 29.7 mg/dL, creatinine 1.32 mg/dL) was normalized after hydric resuscitation. The CT scan performed after 72 h, showed heterogeneous pancreas, mostly at the body and tail, with peripancreatic fluid and in the left lateroconal fascia (Figure 1).

During the hospitalization, the patient had severe back pain that irradiated at the left flank, pelvic, and left inguinal region. The abdominal examination showed tenderness of the left flank, which was edematous, and pelvic region. The laboratory findings evidenced an important inflammatory syndrome (red blood cells 4,090,000 UI/L, hemoglobin 12.1 g/dL, hematocrits 39.3%, white blood cells 29,700 UI/L, neutrophils 85.3%, platelets 347,000 UI/L, C reactive protein 23.10 mg/dL), which was accompanied by sub

febrile temperature. Probabilistic antibiotic therapy by Imipenem/Cilastatin was started. After a slightly clinical improvement, the patient referred a sharp pain and non-reducible tumefaction of the left inguinal region. Another CT scan was performed and it detected organized peripancreatic fluid collections in the lateroconal planes and fascia Gerrota, mostly on the left side. A left inguinal hernia with small intestinal content surrounded by liquid was also described (Figure 2).

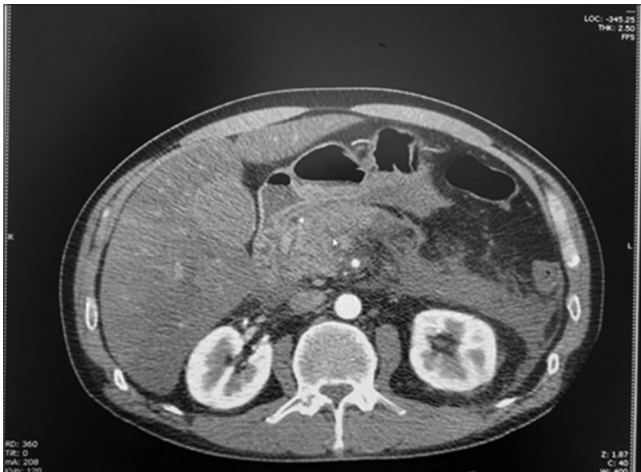


Figure 1: Computed tomography scan (+72 h), showing fluid in peripancreatic and left anterior pararenal space

The patient underwent surgery for incarcerated inguinal hernia. The open hernia repair approach was chosen to explore the inguinal canal. Intraoperatively, a moderate amount of turbid brown fluid was discovered within the inguinal canal, but no obvious hernia sac was found. During groin exploration, multiple fat necrosis found around the spermatic cord, the cremaster muscle, and all over the inguinal canal wall were resected (Figure 3). The scrotum and testicles were intact. A drain was placed up to the bottom of the scrotum and took off after 10 days.

The histological examination of the resected tissues confirmed the diagnosis of cytosteatonecrosis.

During the stay in intensive care unit, the patient clinical and biochemical conditions improved

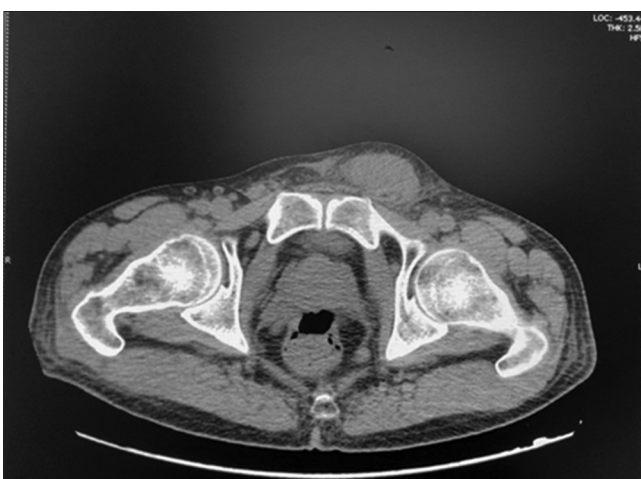


Figure 2: Computed tomography scan showing liquid from pancreatic origin mimicking left inguinal hernia

significantly. Peripancreatic and paracolic pseudocysts were formed and it was decided to be followed on long-term, as long as they were clinically asymptomatic. The patient was discharged from the hospital in satisfactory conditions.

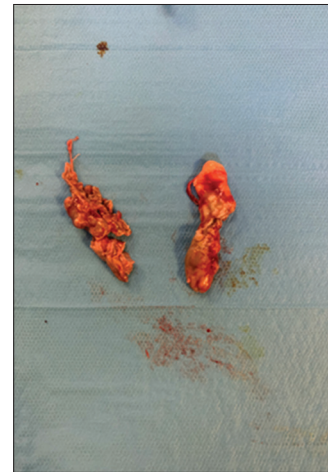


Figure 3: Fat necrosis resected during groin exploration

## Discussion

Involvement of the inguinal canal is an extremely rare complication of acute pancreatitis, but not an impossible event. In our patient, the retroperitoneal fluid from the severe acute pancreatitis, present since the beginning, tracked along the psoas muscle, and entered the left inguinal canal, manifesting clinically as a painful and non-reducible tumefaction. The diagnosis of incarcerated left inguinal hernia and the decision of inguinal hernia repair were mainly based on the CT scan result.

The leak of the fluid arising from the pancreas can also mimic and must be differentiated from incarcerated or strangulated femoral hernia, testicular torsion, acute Epididymo-orchitis, hydrocele, testicular tumor, Hodgkin's lymphoma, mononucleosis, iliopsoas bursitis, and tuberculosis [3], [4], [5].

CT scan remain the chosen radiological examination to diagnose the early and late complications of acute pancreatitis, because of the high specificity and sensitivity rates. The sensitivity rates of CT imaging in pancreatitis are reported 77–92% and the specificity rates approach 100% [6]. Despite this, our case was misdiagnosed radiologically, where the importance of high clinical suspicion in certain cases with atypical clinical signs during acute pancreatitis evolution.

## Conclusion

Acute pancreatitis is a very complex disease and it can be unpredictable. The diagnosis of extra

pancreatic complications can be challenging and it needs a real cooperation between gastroenterologists, radiologists, and surgeons to avoid wrong therapeutic approaches.

This case must raise awareness for a common disease with many uncommon clinical manifestations.

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