Case Report

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Acute necrotizing pancreatitis complicating as Fournier's gangrene

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ABSTRACT

Scrotal involvement is extremely rare complication of acute necrotising pancreatitis. It presents as scrotal swelling and skin color change, which mimics the presentations of testicular torsion, epididymitis, and testicular tumor. Early diagnosis can significantly reduce the associated mortality both with necrotising pancreatitis and Fournier gangrene. Thorough clinical examination along with abdominopelvic Computed Tomography provides a useful means of diagnosing this complication. Here, we are presenting a case of acute necrotising pancreatitis with collection in left pararenal space tracking all the way to reach the left inguinal canal till the root of scrotum, being managed successfully after early diagnosis with early debridement and application of vacuum assisted drainage.

Keywords: Rare complication of pancreatitis, Acute necrotising pancreatitis, Fournier's Gangrene, Radiology in acute pancreatitis, Vacuum assisted drainage

INTRODUCTION

Acute pancreatitis is characterized by activation of digestive enzymes inside the pancreas. In severe pancreatitis, necrosis of pancreas and surrounding tissues may occur. Acute necrotizing pancreatitis manifests as necrotic collections often associated with systemic complications. Extensive retroperitoneal necrosis results in large collections, which can possibly descend till scrotum. Clinically this complication will present as acute scrotum.¹ Rare occurrence and overlapping clinical features result in diagnostic difficulty. Here, we report a case of a young man who presented with fifteen days history of pain upper abdomen, fever and a progressive scrotal swelling, later on diagnosed as acute pancreatitis with necrotic collection extending into scrotum.

CASE REPORT

A 30-year gentleman, chronic alcoholic presented with dull aching pain in upper abdomen and fever. Pain abdomen was diagnosed as acute pancreatitis and managed conservatively. Subsequently he developed a scrotal swelling which was progressive and associated with dull ache. On examination his abdomen was distended with erythematous skin staining present over the periumbilical region and left flank. A 5x5 cm tender, ovoid left inguino-scrotal swelling was noted with absent scrotal rugosities. Left testis, epididymis and cord were not palpable separately. He had a markedly raised total leucocyte count, normal blood sugar levels and increased levels of serum amylase and lipase. Abdominal sonography showed acute peripancreatic fluid collection extending to left paracolic gutter with abdominal contents herniating into left inguinal canal and hemiscrotum. Computed tomography (CECT) abdomen and pelvis were suggestive of necrotizing pancreatitis with acute necrotic collection extending into left posterior pararenal space, and tracking all the way to reach the left inguinal canal till the root of scrotum. (Figure 1 and 2). Initially started on empirical antibiotics with supportive management. Over the stay his fever persisted and uptrend was observed in total counts. Two days later he developed erythema over the left hemiscrotum, which rapidly evolved into a small gangrenous patch. Involved skin was debrided, yielding approximately 500 ml of necrotic purulent material. Biochemical analysis of the pus showed elevated amylase level (7989U/L) thereby confirming it to be necrotic pancreatic fluid. Scrotal wound was debrided, extended to inguinal region and a vacuum dressing was applied. (Figure 3 and 4). Over the next 48 hrs. 2000ml of necrotic fluid was drained. Subsequent abdominal sonography showed decrease in peripancreatic collection size. Patient showed rapid improvement as the collection was drained through scrotum and could go home after 10 days. Scrotal incision healed spontaneously over the next two weeks and till now after 12 months has not developed inguinal hernia or any local signs.

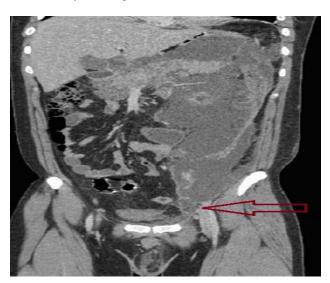


Figure 1: Coronal CT image of acute necrotic collection in left posterior pararenal space tracking into left inguinal canal (marked by arrow).



Figure 2: Sagittal CT image of collection tracking all the way to reach the left inguinal canal till the root of scrotum (marked by arrow).



Figure 3: Post debridement of the scrotal skin and drainage of necrotic collection.



Figure 4: Post debridement application of vacuum dressing over the wound.

DISCUSSION

Acute necrotizing pancreatitis occurs in around 10-25% of patients of acute pancreatitis with mortality rate as high as 25%.2 Fournier gangrene on its own also has a significant mortality rate of 24-34%.3 Fournier gangrene most often occurs in the setting of compromised host immunity, with introduction or seeding of mixed flora from an initial infectious focus into perineal tissue. The infection is typically polymicrobial, involving mixed aerobic and anaerobic bacteria of the gastrointestinal and genitourinary tracts as well as cutaneous microorganisms. Approximately one-quarter of Fournier's gangrene cases are idiopathic with no known source. However, the pathological processes leading to perineal and genital gangrene and sepsis can usually be tracked back to a gastrointestinal, genitourinary, or cutaneous primary lesion.4

Involvement of the genitourinary tract system, especially of the scrotum is a rare complication of pancreatitis.⁵ First such case report of accumulation of pancreatic fluid in scrotum was published in 1979.6 Scrotal involvement of acute pancreatitis presents as unilateral or bilateral scrotal swelling with overlying skin changes, and sometimes it can be indistinguishable from other acute scrotal lesions, such as testicular torsion, acute epididymitis or a testicular tumor.^{7,8} Color doppler ultrasonography features of acute pancreatitis-related scrotal swelling like sparing of testis and spermatic cord has been described in several reports but its correlation with pancreatitis is difficult to achieve, especially if the scrotal swelling is the main problem in a patient with acute pancreatitis.9 Testes are typically not affected in pancreatitis-related scrotal swelling, because the fibrous tunica albuginea and tunica vaginalis cover the testes.

CECT abdomen with pelvis can play a crucial role in achieving a correct diagnosis. Delays in diagnosis and treatment confer up to an 88% mortality. The most significant modifiable risk factor for Fournier's gangrene mortality is time to surgical intervention. Early intervention has the potential to decrease mortality by half. Delays a crucial role in diagnosis and treatment confer up to an 88% mortality. The most significant modifiable risk factor for Fournier's gangrene mortality is time to surgical intervention.

We have reported a case of necrotizing pancreatitis resulting in retroperitoneal abscess, which tracked via left paracolic gutter and inguinal canal into scrotum triggering the impending Fournier's gangrene. This is an unusual complication of necrotizing pancreatitis. Despite the cause a rapid, accurate diagnosis with early aggressive debridement is the mainstay lifesaving treatment. In advanced Fournier's gangrene substantial debridement of perinium is required, which can have future fertility implications in a young male patient. 11

Over the past few decades negative pressure/vacuum assisted dressings have revolutionized wound care globally. This technique involves application of an opencell foam onto the wound followed by the application of an adhesive cover to seal the wound from external contamination in order to facilitate the application of controlled sub-atmospheric pressure. ¹² Circulation is enhanced four times, with increased rates of granulation tissue formation, lowered bacterial counts and enhanced tissue survival. ¹² Serial debridement along with time-consuming and painful daily dressings are avoided. The VAC system removes excess wound exudate and there by decreases oedema. ¹² It facilitates early ambulation combined with a reduction in hospital stay and morbidity of patient. ¹³

CONCLUSION

Fournier's gangrene of scrotum is an extremely uncommon complication of acute necrotizing pancreatitis and has a fulminant course. Timely detection and

debridement are the key factors deciding prognosis and outcome.

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