

CASE REPORT

A rare case of Fournier's Gangrene

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Abstract

We report a rare case that highlights acute pancreatitis as the protagonist of Fournier's Gangrene. This patient was treated with a radical debridement of his perineum at presentation and subsequently reconstructed with split thickness skin grafting. This is an unusual aetiology of necrotizing fasciitis with only one other case reported in the literature. This serves to emphasize to physicians that acute pancreatitis is a potential source when investigating and treating patients with Fournier's Gangrene.

INTRODUCTION

Necrotizing fasciitis/Fournier's Gangrene is a rare, life-threatening soft tissue infection that can rapidly progress to systemic toxicity if not treated promptly [1]. Its aetiology is poorly understood, and it can often be triggered by a very minor inciting event, such as an insect bite or minor trauma [1]. Early detection combined with aggressive surgical debridement, multidisciplinary team input and good reconstructive techniques are key factors for survival and good outcomes.

CASE REPORT

A 48-year-old male, with a background of chronic pancreatitis and alcohol dependency, presented with septic shock. He had a cellulitic, oedematous and mottled discoloration of his genitalia and perineum, concerning for Fournier's Gangrene. He was transferred from a peripheral institution to a tertiary centre for intensive care unit (ICU) and multidisciplinary surgical support.

He had a radical debridement by urology, plastic and general surgery on-call services. At the time of surgery, it was noted that there was copious amounts of pus tracing out of his left

inguinal canal. Further examination revealed a large left-sided retroperitoneal collection and two large drains were placed (Fig. 1). The peritoneal cavity was then examined and no intra-peritoneal collection was noted.

Computed tomography scan of his abdomen/pelvis demonstrated acute-on-chronic pancreatitis, with focal necrosis at the head of the pancreas. Fluid tracking from pancreas into the retroperitoneum and down to the perineum was visualized, with subcutaneous emphysema in left flank (Fig. 2). The patient was stabilized in the ICU with inotropic support and intravenous antibiotic therapy. He returned to theatre for further debridement of non-viable soft tissues, and medial thigh pouches were created for his testes. His wounds were dressed with vacuum-assisted closure® (VAC) device.

Polymicrobial growths were isolated from cultures sent at the time of his initial debridement. All were sensitive to piperacillin/tazobactam. Histology of debrided tissue confirmed necrotizing fasciitis. Subsequently, he had a 3-week course of intravenous therapy and then switched to oral antibiotics for a further 3 weeks. The acute pancreatitis (Imrie Score 4) was managed conservatively, with nasogastric feeding. The patient

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Figure 1: Post-extensive debridement of the anterior abdominal wall, scrotum and penile skin with a large Penrose drain placed retroperitoneally on the left side.



Figure 2: Coronal section of computed tomography scan showing acute-on-chronic pancreatitis (calcifications visible) with surgical emphysema in lower left abdominal wall planes.



Figure 3: Post-multiple VAC dressing changes, just prior to split-skin grafting (testes in medial thigh pouches).



Figure 4: Day-7 post split-skin grafting with 100% uptake and excellent healing of donor site (left thigh).

was found to have diabetes mellitus (type 2) and commenced oral treatment.

After multiple debridements and VAC changes, the abdomino/perineal skin defect was ready for resurfacing with a split-skin grafting (Fig. 3). This was 100% taken by Day-7

post-operatively and he was discharged well for convalescence (Fig. 4). Follow-up review in out-patients at 2 months demonstrated an excellent recovery.

DISCUSSION

Necrotizing fasciitis (NF) is a rare, potentially life-threatening soft tissue infection [1]. Its incidence is low, with an estimated 500 cases per year in the UK [1]. Reported mortality varies (0-25%),

but is closely related to existing co-morbidities including diabetes, underlying neoplasms, chronic vascular disease, renal impairment or alcohol abuse [2, 3]. The most common source is polymicrobial (as in this case), with Group A streptococcus being the most common organism cultured [4]. The aetiology, however, is poorly understood.

Diagnosing NF and its initiating cause can be elusive, due to the non-specific symptoms in the early stages. Early detection or suspicion, combined with aggressive treatment is the key to success. Classically, the cause is a minor inciting event (trauma, graze and burn) [2]. However, rarer causes have been reported, including secondary to intra-abdominal infectious process such as acute diverticulitis [5, 6]. To date, there has been only one other case of NF secondary to acute pancreatitis published in the literature [2]. We suspect that the pancreatic necrosis resulted in the development of a retroperitoneal abscess, which tracked into the perineum, triggering the NF. Despite the cause, rapid, accurate diagnosis, with early aggressive debridement, is the cornerstone for life-saving treatment. In addition, good intensive care and microbial treatment are key adjuncts [7].

Typically, extensive surgical debridement results in significant disfigurement. Furthermore, with Fournier's Gangrene substantial debridement of the perineum is required, and this can have future fertility implications. The formation of neo pouches in the medial thigh (as in this case) is an excellent method to recreate the environment of the scrotum, and preserve the testes function. Despite this, patients still can have infertility issues.

VAC[®] dressings have revolutionized wound care. Not only it is an excellent temporary wound closure device but it also helps with managing wound exudate, prior to definitive surgical management [8]. It has also been shown to increase fibroblast migration, resulting in improved granulation tissue formation, lowering bacterial counts and can aid in graft uptake success [9].

CONCLUSION

This case emphasizes the importance of good clinical suspicion for any patient presenting with Fournier's Gangrene and its

subsequent management. In addition, it specifically highlights an usual cause of NF, and serves to raise awareness of acute pancreatitis as a potential initiating source.

CONFLICT OF INTEREST STATEMENT

None declared.

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