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Early Diagnosis and Surgical Management of Abdominal Wall Sepsis Following Perineal Abscess

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Abstract: ***Abdominal wall sepsis as a complication of a perineal abscess is a rare but serious condition with high morbidity if not managed promptly. This case report presents a 35 - year - old female who developed sepsis following a perianal abscess, exhibiting high - grade fever, severe pain, and systemic distress. Imaging revealed an extensive abscess with air pockets extending into the abdominal wall. Surgical intervention, including incision and drainage, serial debridements, and vacuum - assisted closure (VAC) dressing, led to successful wound healing. This case highlights the importance of early diagnosis, timely surgical intervention, and proper wound management to prevent complications in such infections.***

Keywords: Abdominal wall sepsis, perineal abscess, surgical drainage, wound management, sepsis management.

1. Introduction

Abdominal wall sepsis occuring as a sequele of perineal abscess is a rare clinical presentation. It is associated with high morbidity and mortality if not managed at an early stage. It is a serious complication where a perianal abscess, spreads to the retroperitoneal space, causing a large and life - threatening abscess due to its deep location and limited ability to drain naturally. It is a rare occurrence and requires prompt surgical drainage and antibiotics.[2]

2. Case Report

35 years old female patient presented with high grade fever, severe pain in perianal and umbilical region since 1 week. On examination tachycardia, hypotension and respiratory distress were present with signs of dehydration, suggestive of sepsis. CT scan Imaging showed perianal abscess with extension of abscess with multiple air pockets in right hypochondrial and around right lumbar region. Patient was taken up for Incision and Drainage of perianal abscess and followed by drainage of abscess over anterior abdominal wall. Multiple debridements were done with serial VAC dressing which ended up in secondary suturing of abdominal wound after thorough improvement of wound.

3. Discussion

Anorectal abscesses are a frequent surgical issue encountered in clinical practice, primarily caused by non - specific cryptoglandular infections, with less common causes including Crohn's disease and hidradenitis suppurativa. These abscesses are categorized based on their location into perianal, ischiorectal, intersphincteric, and supralevator types. Perianal abscesses make up around 60% of all anorectal abscesses and typically result from infections in the perianal glands within the intersphincteric space, potentially extending upwards to form a supralevator abscess. Common symptoms include perianal pain and fever. Inflammatory conditions affecting the rectum and surrounding regions are common, usually located below the puborectalis muscle. If not promptly diagnosed and treated, over 90% of these abscesses are likely to rupture. The puborectalis sling applies considerable pressure on the posterior rectal wall at the anorectal junction, often preventing abscesses from extending into the supralevator spaces. Instead, they typically rupture through the longitudinal muscle and spread trans - sphincterically into one of the infralevator anorectal spaces. However, in rare cases, a low intersphincteric abscess may extend above the puborectalis muscle to form a high intersphincteric abscess that can rupture into the supralevator spaces. Supralevator abscesses can spread into the prevesical space due to direct communication from the pararectal space, where the umbilicovesical fascia ends at the vesical peritoneum reflection. From the prevesical space, the infection may spread anteriorly into the Retzius space and other pelvic areas or posteriorly into the retroperitoneum. The retroperitoneum responds less aggressively to bacterial infection than the intraperitoneal region, often leading to a more subtle, asymptomatic progression. This may delay diagnosis and treatment, increasing the risk of sepsis and mortality. When dealing with significant pre - or retroperitoneal spread, it is recommended to avoid entering the peritoneal cavity to minimize the risk of contamination and secondary peritonitis. Effective treatments include drainage through abdominal incisions or extraperitoneal drainage via lower midline abdominal incisions, typically closed with drains or vacuum - assisted devices.[1, 4]

4. Conclusion

This case report underscores the uncommon difficulties faced by surgeons when addressing perianal conditions, focusing on the complexities that challenge them in multiple areas. A deep understanding of the perianal and retroperitoneal regions is essential for surgeons to make well - informed decisions about surgical treatment. Proper drainage of perianal abscesses is crucial for patient care, and the adoption of new techniques is becoming more vital for treating retroperitoneal abscesses. A collaborative approach, incorporating advancements in surgery and radiodiagnosis, is key in effectively managing these complex cases both before and after surgery.

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