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# Appendicular abscess with uncommon extension into the anterior abdominal wall and associated necrotizing fasciitis: A case report

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## Introduction

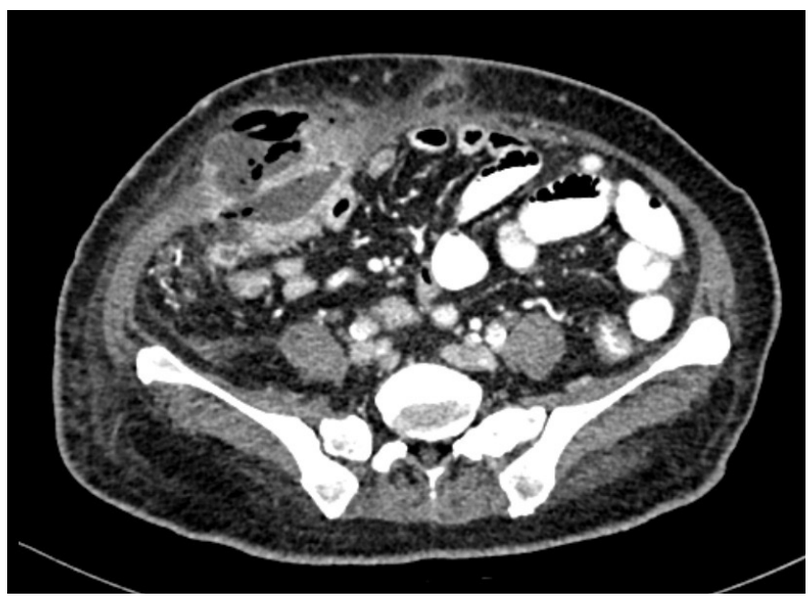
Appendicitis is a common surgical emergency, however appendicular abscess complicated with anterior abdominal wall necrotizing fasciitis is exceedingly rare. This study presents a unique case of appendicitis, where an abscess formed in the appendix and spread through the tissues to reach the front of the abdominal wall. This extension of the infection further complicated the situation by causing necrotizing fasciitis, a rare but serious condition that rapidly destroys the body's soft tissues. We emphasize the scarcity of reported cases with direct extension into the abdominal wall, compared to the more common scenario of retroperitoneal perforation.

## Case report

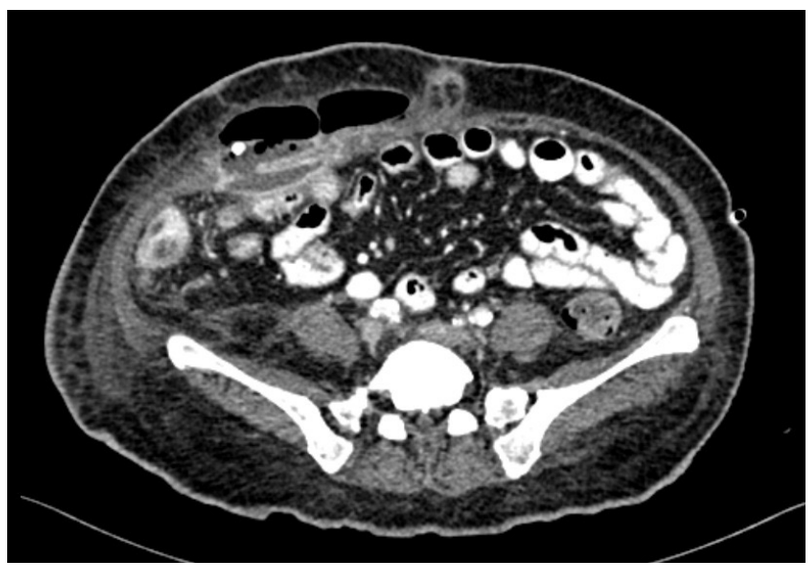
A 62-year-old lady presented to us complaining of having right iliac fossa pain and swelling for the past 3 weeks. Clinically, there is a palpable mass over her right iliac fossa. She recently had acute myocardial infarction, 3 months prior during which she underwent percutaneous coronary intervention. On CT abdomen, she was diagnosed with appendicular abscess extending to the anterior abdominal wall. She initially was treated with intravenous broad spectrum antibiotics and underwent percutaneous drainage of the intraabdominal collection in view of her recent cardiac intervention. Despite the treatment provided, clinically she had progressed to develop necrotising fasciitis manifested by spreading cellulitis and crepitus with increasing white cell count and CRP. This patient had underwent emergency open right hemicolectomy and extensive wound debridement over the anterior abdominal wall. Post operatively, her anterior abdominal wound was managed with negative pressure wound therapy.

## Discussion

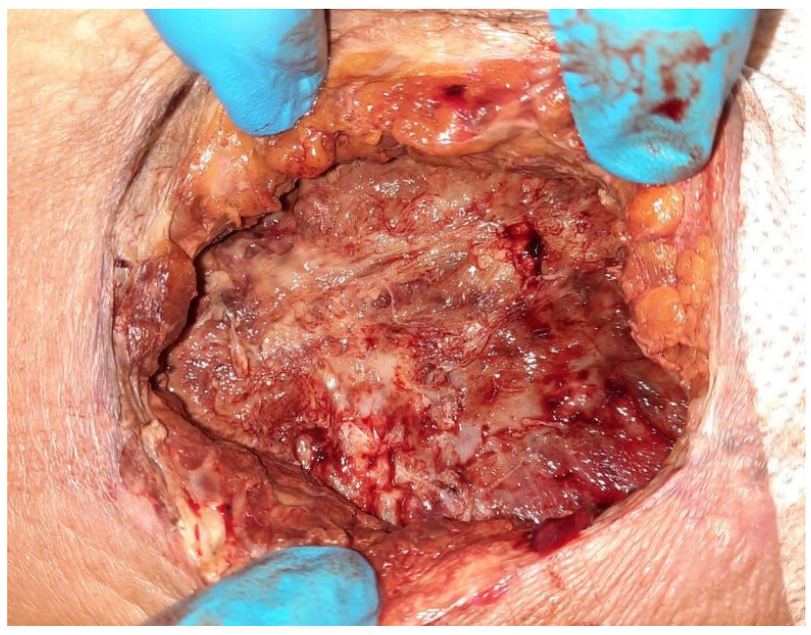
Acute appendicitis is a common surgical case and can be presented as a spectrum of complexity. Appendiceal abscess with anterior abdominal wall necrotizing fasciitis is a rare complication of appendicitis and the outcome can be detrimental to patient as it carries higher rate of morbidity and mortality. The mortality rate can be as high as 30-40%[1]. An appendicular abscess arises when a ruptured appendix fails to drain pus effectively. This localized infection can spread in various ways, and in rare cases, it breaches the confines of the abdominal cavity and infiltrates the deeper tissue layers of the anterior abdominal wall. This can involve the fascia, a connective tissue layer that supports muscles. Perforations usually occurs into the retroperitoneal area which causes abscess to the psoas muscle, right perinephric space, lumbar triangles, groin or thigh[2,3]. Rarely perforations extends to the anterior abdominal wall which can lead to enterocutaneous fistula and necrotising fasciitis of the anterior abdominal wall. The rarity of this complication combined with the often unspecific initial presentation of appendicitis can make timely diagnosis difficult. Early signs of acute appendicitis might be overshadowed by the progression of necrotizing fasciitis. CT scan is essential for diagnosis and to assess the extension of the abscess. Over the years, conservative treatment with intravenous  antibiotic with or without percutaneous drainage followed by interval appendicectomy has been the treatment of choice for patients with appendicular abscess to avoid extended surgery and to prevent post operative complications. However, patients who failed to respond to conservative treatment will need surgical intervention. The cornerstone of treatment involves aggressive surgical debridement. This involves removing all infected and necrotic tissue from the abdominal wall fascia and muscles.  This may necessitate extensive surgery and skin grafting depending on the severity.



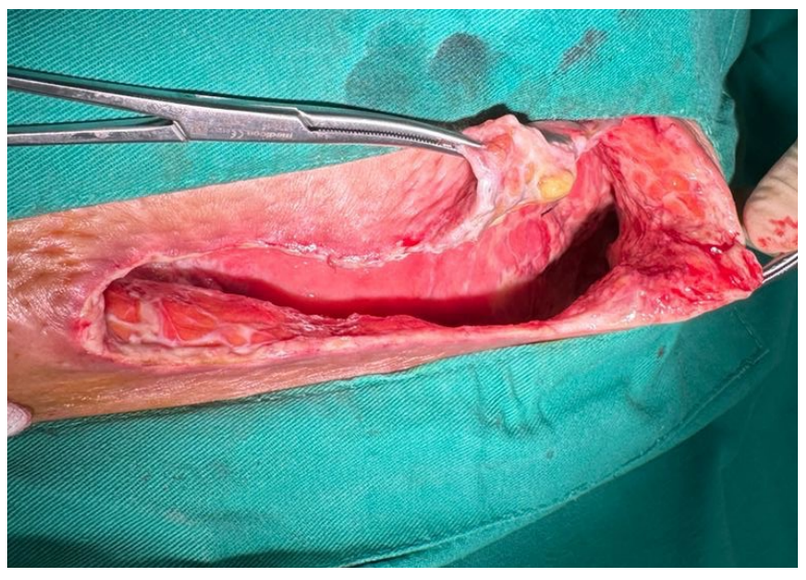
Initial CT Abdomen



CT Abdomen reassessment with percutaneous drainage in situ



Wound inspection on Post op Day 1



Wound inspection after series of negative pressure wound therapy

## Conclusion

In conclusion, appendiceal abscess complicated with anterior abdominal wall necrotizing fasciitis is rare but life threatening. Early detection and aggressive surgical treatment is essential to improve patient survival.

**References**

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