

CASE PRESENTATION

A 62-year-old male presented to emergency department with pain in left thigh, with purulent material draining and fever. He presented a clinical history of rectal squamous cell carcinoma 8 years earlier, treated with abdominoperineal resection and colostomy. After performing blood tests, the onset of sepsis was confirmed by high levels of CRP, lactic acid and leukocytosis.

Abdominopelvic CT in venous portal phase shows the presence of gas in the subcutaneous tissue that extended from left perianal region to the left thigh root, dissecting obturator muscles and gluteal musculature. There are also ill-defined fluid collections along the deep fascial sheaths and signs of edema with extension into the inter-muscular septa. No intraabdominal pathological findings are observed.

After these findings, the diagnosis of necrotizing fasciitis is established.

DISCUSSION

Necrotizing fasciitis is a progressive, rapidly spreading infection of the deep fascia, with secondary necrosis of the subcutaneous tissues. The most common location are the extremities followed by the perineum, the trunk, and the head and neck.

There are no true risk factors for necrotizing fasciitis, but there are predisposing factors such as injectable drug use, chronic debilitating comorbidities (eg, diabetes mellitus, immunosuppression, obesity) and peripheral vascular disease.

Necrotizing soft-tissue infections are often accompanied by gas-forming anaerobic bacteria, usually in association with aerobic gram-negative organisms.

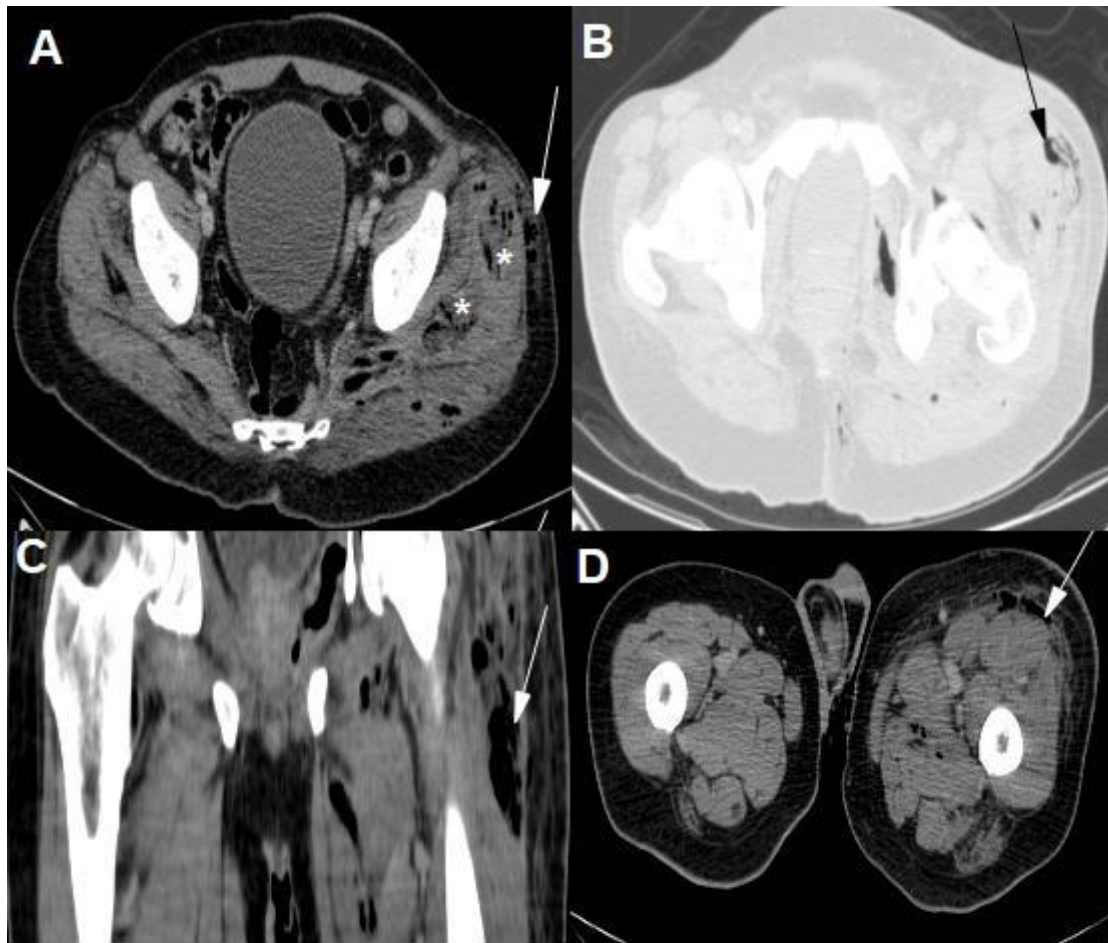
The disease usually starts with inoculation of bacteria in the deep soft tissues after a skin wound. The main diagnostic dilemma is distinguishing cellulitis from deep soft-tissue involvement occurring in necrotizing fasciitis, which is more dangerous and requires more aggressive treatment, including surgical debridement.

The main diagnostic sign that the radiology must look for is the presence of gas in the subcutaneous tissues caused by these anaerobic organisms, although gas is not always observed. Other CT features that should be considered include thickening of the affected fascia, fluid collections along the deep fascial sheaths and edema extension into the inter-muscular septa and muscles.

CONCLUSION

Necrotizing fasciitis constitutes a life-threatening surgical emergency. Unfortunately, this infection can be difficult to recognize in its early stages and it's a rapidly progressive condition. Although establishing the diagnosis requires a high clinical suspicion, image

studies can play a vital role the early diagnosis, allowing to perform an early and successful treatment.



Contrast enhanced CT in portal phase shows gas in subcutaneous tissue (arrows) that extend dissecting left gluteal and obturator musculature planes (A, B) and it is also present in left thigh root (C, D).

Other features are fluid collections along the fascial sheaths (asterisks), thickening of the muscular fascia and extension of edema into the inter-muscular septa.

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