

Necrotizing fasciitis: An exceptional clinical presentation of colonic tumor

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Introduction:

Necrotizing Fasciitis (NF) is an aggressive, life threatening, soft tissue infection with an incidence of 0.5 – 1.5 cases per 100,000 population [1]. It is usually due to synergetic polymicrobial infection. Most common causes of NF are trauma, urinary tract disease and perineal abscess [1]. Treatment involves early surgical debridement of infected tissue followed by broad-spectrum antimicrobial therapy and supportive measures [2]. However only few cases of NF associated with intestinal diseases such as perforated colon cancer have been reported [1]. We present a case of colonic cancer complicated by NF of the thigh.

Case report:

A 76-year-old male patient, with no medical history, presented to the emergency department with swelling of the inner side of his left thigh. On physical examination, the patient was febrile at 38°C, Glasgow coma scale at 14/15. Blood pressure was 8/4 cm Hg, heart rate was 125 bpm. The patient had polypnea at 25c/min. He had a swelling measuring 15cm in the inner side of his left thigh with skin necrosis and inflammatory signs. The abdomen was soft and not painful. However, there was a swelling measuring 5 cm in the left inguinal region with inflammatory signs. Computed tomography (CT) angiography of the lower limb showed fluid and gas tracking along fascial plans of the left thigh extended over 30 cm (Figure 1). The diagnosis of septic shock related to necrotizing fasciitis of the left thigh and abdominal wall was retained and we decided to operate the patient under general anesthesia. Since the induction the patient presented a drop in blood pressure with tachycardia at 150 bpm requiring high doses of catecholamine.

In the first step, we started with an incision in the left inner thigh. About 100 milliliters of pus was removed. Dissection into quadriceps muscle plans allowed drainage of 200 milliliters of pus with necrotic debris which were excised. In the second step, we proceed by incision in the left inguinal region. Dissection into muscle plans allowed drainage of 100 milliliters of pus with necrotic debris. In the third step, an abdominal midline incision was made. We discovered a 5 cm tumor in the sigmoid based on iliac arterial bifurcation: it was perforated in the retroperitoneum (Figure 2). The tumor was unresectable, we only performed a colostomy in the left flank with a biopsy of the tumor. Pathological examination of the specimen showed a well differentiated Lieberkuhnian adenocarcinoma. Bacteriological examination of the pus showed *E. coli* multi drug-sensitive. Due to septic shock and despite the aggressive debridement of necrotic tissues, high doses of intravenous antibiotics and intensive care support, the patient deceased one day after surgery.

Discussion:

Due to acute and rapidly progressive course, NF has a high mortality rate estimated at between 25% and 75% [1]. It's life-threatening surgical emergency. Thus, early diagnosis of necrotizing soft-tissue infections followed by administration of intravenous antibiotics and surgical debridement is the best way of decreasing

its mortality [3]. In our case, the delay between our physical examination in the operating room and physical examination in the emergency department highlights the importance of early care in this type of soft-tissue infection.

NF of the abdominal wall due to colorectal cancer is widely reported in the literature. However, NF of the thigh caused by colorectal cancer, as in our case, is extremely rare. In this case, a retroperitoneal abscess formed through the femoral ring and reaching the thigh caused NF to occur [1]. Literature review of atypical presentations of perineal necrotizing fasciitis revealed that perforated gastrointestinal tract malignancy was the etiology in 16% [4].

Clinical features of NF include high fever with chills, tenderness over the affected area along with changes in skin color and palpable crepitus [3]. In this case report, the patient presented with sepsis, swelling of the thigh and abdominal pain. NF was not suspected as no suspicious medical history was present. However, imaging showed the classic findings of fluid and gas tracking along fascial planes. From swelling of the thigh to septic shock, these clinical presentations highlight the clinical polymorphism of NF. It is often initially missed leading to lengthy delays in diagnosis and treatment. Weight loss, transit disorders and abdominal pain, like in our case, are signs that can guide to colon cancer as an etiology of NF.

NF can be difficult to recognize in the early stages, so a low index of suspicion is needed when confronted with rapidly spreading erythema or subcutaneous crepitus. Skin necrosis and blistering are late signs [5]. Patients with unexplained soft tissue infections of the thigh should raise suspicion for abdominal pathology and need urgent CT scan [5] for timely diagnosis to avoid delays in the management of sepsis and to offer a better operative planning and counseling for the patient.

The cornerstone of management of NF is recognized as being aggressive surgical debridement and intensive support [6]. Urgent surgical debridement down to healthy tissue allows to stop the spread of the infection and reduces systemic toxicity. In fact, the NF is lethal without operative debridement. Intravenous antibiotics should be started promptly and modified when sensitivities return. However, it is essential to ensure that adequate necrotic material is removed at the first opportunity to reduce the risk of further progression, regardless of the defect that will remain [6].

Conclusion:

Our case is interesting due to the unusual clinical presentation of the patient with a colon perforation. It emphasizes the importance of early clinical suspicion, appropriate antimicrobial and aggressive surgical debridement in the treatment of NF.

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Figure legends:

Figure 1: Necrotizing fasciitis in Computed tomography (CT) angiography

Figure 2: Intraoperative view showing a 5-cm tumor in the sigmoid adherent to retroperitoneum.



