

Necrosating Fasciitis, An Unusual Post-Operative Complication : A Case Report

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1. Abstract

Necrotizing fasciitis is a rare infection of the skin and deep subcutaneous tissue, spreading along fascia and fatty tissue. The absence of pathognomonic symptoms makes its diagnosis difficult. Rapidly progressive, it is a life-threatening emergency whose prognosis is fatal in 30% of cases. Necrotizing fasciitis is a real medical-surgical emergency. This article takes up the case of a 38-year-old young woman who developed abdominal parietal gangrene on day 8 of a caesarean section.

2. Introduction

Postoperative parietal complications can be exceptionally major and serious. Necrotizing fasciitis is a rare necrotizing infection of the dermis and hypodermis extending along muscle fascia. Rapidly progressive and fatal. The general risk factors are essentially diabetes, obesity or undernutrition and immunosuppression. The treatment of necrotizing fasciitis is medico-surgical. Multidisciplinary collaboration is necessary to optimize patient care. We report in this work the case of necrotizing fasciitis of the abdominal wall that occurred in a 38-year-old woman on day 8 of a caesarean section.

3. Observation

This is a case of 38-year-old patient with a medical history of android obesity, non-insulin-dependent diabetes, unbalanced on oral antidiabetics, she had a caesarean section on 04/27/2022 for breech presentation, macrosomia in a primipara in the active phase of labour, not monitored for her pregnancy, having no scanno-pelvimetry, giving birth to a newborn in good health

The immediate post-operative follow-up was simple. On postoperative day 8, the patient presented to the maternity ward for fever associated with pelvic pain which gradually subsided. The admis-

sion examination had found a patient with fever at 39.8, tachycardia at 102 bpm, polypneic at 23 bpm, with ketonic breath and at the abdominal level, there is an erythematous plaque centered in an area of skin necrosis and resulting from pus from the cesarean section scar (figure 1), biology shows an increase in the syndrome inflammatory: leukocytes at 15,200/mm³, C-reactive protein at 405.5mg/l, a wound swab returned in favor of ceftriaxon-sensitive *Escherichia coli* and capillary blood sugar at 2.5.

An abdomino-pelvic CT scan was performed urgently showing significant infiltration of subcutaneous cellulose-fatty tissue, as well as rectus and oblique muscles at the level of the anterior abdomino-pelvic wall associated with the presence of gas bubbles and extended to the suprapubic fossa, taking up the contrast after injection of contrast product (figure 2).

The patient was immediately admitted, stabilized, put on insulin, antipyretic and antibiotic therapy (trioxon 2g/d + flagyl 500mg x 3/d + gentamicin 160mg/d).

In the face of signs of septic shock, a surgical indication is made under general anesthesia. The intervention consists of a wide necrosectomy: placement of sterile drapes, realization of a midline vertical incision under the umbilical with widening of the pfannenstiel incision (giving an inverted T incision).

On exploration, the intra-abdominal tissues appear gray and necrotic with a purulent and malodorous discharge (figure 3), responsible for the release of sutures from the aponeurosis and the hysterotomy (figure 4), with the presence of false membranes throughout around hysterorrhaphy redone after excision of the edges of the hysterotomy, abundant washing with saline solution, then resection of the necrotic cellulocutaneous tissue up to the aponeurosis which was affected in contact with the anterior surface of the rec-

tus muscle performed by plastic surgeons. Subsequently, washing with hydrogen peroxide and Betadine, reviving the edges of the aponeurosis and suturing with a separate X stitch. Placement of two delbet blades subcutaneously (Figure 5).

Antibiotic therapy was maintained postoperatively for 15 days, with local care strictly respecting the rules of asepsis. The evolution was favorable (Figure 5).



Figure 1: clinical aspect of abdominal necrosis

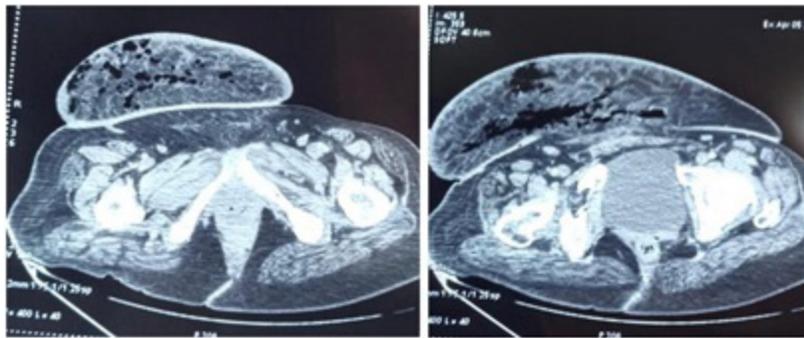


Figure 2: scanographic image in favor of abdominal necrotizing fasciitis



Figure 3: intraoperative image : initial exploration



Figure 4: intraoperative image : end of intervention



Figure 5: cicatrisation

4. Discussion

The first description of necrotizing fasciitis was made by the surgeon Joseph Jones during the Civil War in the USA in 1871, they were then called "hospital gangrene" [1]. From the pathophysiological point of view, necrosis is secondary to the presence of thrombosis in the hypodermic microcirculation due to the action of toxins and bacterial enzymes [2, 3].

Goepfert reports 1.8 cases of NF per 1,000 caesareans [4]. Furthermore, Out et al. Report an increase of 1 to 4 cases of necrotizing fasciitis per 100,000 pregnant patients hospitalized in Texas between 2001 and 2010 [5]. This increase in incidence could be explained by an overdiagnosis of necrotizing fasciitis in cases of severe soft tissue infections and by comorbidity factors favoring this complication such as obesity and diabetes. The hormonal changes of pregnancy affect the maternal immune system, such that the development of infections and severe sepsis are favored [6, 7].

The clinical symptoms are manifested by [8]: erythema, diffuse oedema, hemorrhagic phlyctene, deep necrosis reflected by gray blue spots poorly defined on the geographical map. There are also general signs (fever, pain), see septic shock. The paraclinical assessment is necessary to assess the severity of the sepsis and the multi-visceral impact. Blood culture and bacteriological samples are systematic [1, 9, 10]. Abdominopelvic CT has a high specificity for diagnosis [11]. The treatment is medico-surgical. However, the effectiveness of hyperbaric oxygen therapy in the management of necrotizing fasciitis remains controversial and has not been able to be verified so far by solid statistical studies [12, 13].

5. Conclusion

Necrotizing fasciitis is a rare necrotizing dermo-hypodermatitis, the outcome of which can be fatal if the diagnosis is not made in time. Management is multidisciplinary and treatment combines aggressive surgical debridement and broad-spectrum antibiotic therapy. The interest of hyperbaric oxygen therapy is still controversial at present.

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