

**NECROTIZING FASCIITIS OF THE BREAST: CONSERVATIVE TREATMENT: A  
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**Abstract**

Necrotizing fasciitis is a serious condition that can be life-threatening through septic shock. Mammary localization is exceptional and the diagnosis is often made late because of the frequent confusion of this form with breast abscesses. The management is multidisciplinary medical and surgical. The aesthetic damage constitutes the main therapeutic constraint due to the rapid extension of the necrotic lesions secondary to a massive thrombosis of the vessels running in the fascia territories. We report the case of a necrotizing fasciitis of the right breast in a diabetic woman aged 54 years and we describe the clinical features and therapeutic results of this rare form.

**INTRODUCTION**

Necrotizing fasciitis (NF) is a severe infection of the cutaneous and subcutaneous tissue extending to the deep fascia, responsible for extensive necrosis.<sup>[1]</sup> The rapid extension of the necrosis is related to thrombosis of the vessels running through the fascia territories.<sup>[2]</sup> Mammary localization is exceptional and is often confused with a breast abscess or cellulitis; it is often secondary to breast surgery and primary forms are rarer.<sup>[3]</sup> The management of this form is confronted with an aesthetic prejudice and the diagnostic delay can be fatal. The treatment is based on a wide excision of the necrotic tissue associated with the prescription of broad-spectrum antibiotic therapy. We report the outcome of conservative treatment of a primary necrotizing fasciitis of the right breast in a 57-year-old diabetic woman.

**PATIENT AND OBSERVATION**

We report the case of a 54-year-old woman, postmenopausal, diabetic for 1 year under insulin, multiparous, who consulted the emergency room for right mastodynia associated with a fever of 39°C evolving for 3 days with NSAIDs intake by self-medication. The interrogation revealed the appearance of inflammatory signs in the left breast at the beginning, followed rapidly by the formation of phlyctenes. Initial examination revealed necrotic lesions predominantly in the inner and lower quadrants extending over 13 cm with no obvious underlying collection (Figure 1).

**FIG. 1.**

Palpation revealed subcutaneous crepitus. Breast ultrasound showed edematous infiltration of the left breast associated with homolateral axillary adenopathies without evidence of suspicious lesions. Mammography was not performed immediately in view of the significant mastodynia. Thus, the diagnosis of FN was strongly suspected in the absence of abscesses and suspicious lesions on ultrasound. The patient was put on a broad-spectrum antibiotic therapy combining betalactam-clavulanic acid 2g x 3 per day and gentamicin 160 mg per day with excision of the necrotic skin and glandular tissue preserving the nipple-areolar plate. Bacteriological samples were positive for Klebsiella.

Anatomopathological examination concluded that there was dermal and hypodermal necrosis associated with necrosis of the glandular tissue and did not reveal any suspicious cells. Directed healing was then initiated in the hospital with daily dressing changes initially in the operating room, minimal excision of the necrotic tissue, and application of famazine ointment (Figure 2.3.4).



**FIG. 2.**



**FIG. 3.**



**FIG. 4.**

## DISCUSSION

Since 2001, a consensus conference has proposed a classification of cutaneous infections according to the severity and depth of involvement.<sup>[4]</sup> Thus, it defined:

simple bacterial dermohypodermatitis or erysipelas, with hypodermic involvement of variable depth but which is not accompanied by necrosis and does not reach the deep fascias. The treatment of this form is medical; necrotizing cellulitis, which associates a necrosis of the connective tissue and the adipose tissue, but does not affect the deep fascias, and whose treatment is surgical; necrotizing fasciitis, in which the necrosis reaches and exceeds the deep fascia, with more or less extensive involvement of the intermuscular fascias and the muscles. This is the form we describe in this case report. The germ involved is often group A beta-hemolytic streptococcus, and it constitutes a true life-threatening emergency. The risk factors that have been reported in the FN are diabetes, alcohol consumption, hematological diseases and cancers, use of non-steroidal anti-inflammatory drugs or immunosuppressive treatment and age over 65 years.<sup>[5,6]</sup> Our patient had diabetes for 1 year on insulin with poor compliance to treatment. During her hospital stay, her blood glucose levels were high and the control of her diabetes required the use of high doses of insulin.

The diagnosis of NF is primarily clinical and is often confused with breast abscess or cellulitis.<sup>[3]</sup> It should be suspected by the intense pain, the presence of phlyctenes, the necrotic lesions of rapid extension and the perception of crepitus under the skin.<sup>[7]</sup> However, it is not uncommon to observe subacute forms, especially in diabetic patients, where the pain may be less marked and the skin manifestations are falsely reassuring and often associated with more severe deep lesions.<sup>[8,9]</sup> The diagnosis of FN in our patient was suspected at an early stage in view of the diabetic background, the hyperalgesic character and the striking skin manifestations. The absence of collections or palpable nodules and the results of the initial ultrasound were not in favor of a neoplastic origin or a breast abscess and confirmed the diagnosis of FN. In misleading forms, imaging is of great importance. Magnetic resonance imaging is the most efficient technique to objectify soft tissue abnormalities and their distribution.<sup>[2]</sup> The most common abnormality is the thickening of the deep fascia, with a T2 or T1 hyper signal under contrast, resulting from an accumulation of fluid and a hyperemic reaction along the necrotic fascia.<sup>[10,11,10,11]</sup> The treatment of necrotizing fasciitis relies on early surgery to excise the necrotic tissue to avoid extension of the lesions and to promote directed healing with minimal cosmetic damage. Antibiotics are sometimes ineffective due to the presence of thrombosis in the vessels, thus limiting tissue diffusion. The precocity of the surgical intervention is a determining prognostic factor. Excision is the main procedure. There is no cure without total excision of the necrotic tissue.<sup>[4]</sup> Further excision is often necessary and requires daily monitoring for the first few days. Reconstructive surgery is only considered once the excision is complete and the patient is in good general condition.

## CONCLUSION

Necrotizing fasciitis of the breast is rare and poses the problem of delayed diagnosis because it is often confused with cellulitis or an abscess, sometimes because of the delay in the appearance of cutaneous signs. A delay in diagnosis can be responsible for serious complications, sometimes involving the vital prognosis and greatly hindering the aesthetic result. The initial severity of the septic state, age and underlying pathology are risk factors for mortality. The precocity of the surgical procedure in the first 24 hours following admission is a major determinant of the prognosis. A multidisciplinary management allows to improve enormously the results, both in terms of survival and aesthetic damage.

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