Necrotizing Fasciitis of the Breast after Topical Application of Traditional Herbal Medicine: A Case Report

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Abstract

Necrotizing Fasciitis (NF) is an aggressive, rapidly progressing and life-threatening infection characterized by spreading necrosis of subcutaneous tissue and fascia. NF of the breast is a very rare entity. We present a case of NF of the breast occurred in a 22-year-old breastfeeding woman after topical application of traditional herbal medicine. As far as our knowledge is concerned, it is the first case documented in the literature occurring after topical application of traditional herbal medicine and the first case of breast’s NF documented in Africa in a woman with no comorbidity under 25 years of age. It is critical to sensitize women on the subject because NF is a life-threatening disease and mastectomy is both an aesthetic and psychological tragedy for a young woman in a context in which breast reconstructive procedures are not commonly performed.

Keywords: Necrotizing fasciitis; Breast; Breastfeeding woman; Herbal medicine; Mastectomy.

Introduction

Necrotizing Fasciitis (NF) is an aggressive, rapidly progressing and life-threatening infection characterized by spreading necrosis of subcutaneous tissue and fascia [1-6]. It mainly affects the extremities, abdominal wall and perineum [2,4,6-8]. Breast NF is a very rare entity [1-3,5-9]. Less than 20 cases have been reported, with most cases described in patients with comorbidities and after medical procedures or trauma [2,3,5,6,10]. Here we present a case of NF of the breast occurred in a 22-year-old breastfeeding woman after topical application of traditional herbal medicine. As far as our knowledge is concerned, it is the first case documented in the literature occurring after topical application of traditional herbal medicine and the first case of breast NF in a woman with no comorbidity under 25 years of age. It is critical to sensitize women on the subject because NF is a life-threatening disease and mastectomy is both an aesthetic and psychological tragedy for a young woman in a context in which breast reconstructive procedures are not commonly performed.

breast’s NF documented in Africa in a woman with no comor-
bitity under 25 years of age. Moreover, no case reports have
been published in Senegal so far.

Case Presentation

The patient was a 22-year-old female patient with three
pregnancies and deliveries. She had no medical, surgical or
breast trauma past history and was breastfeeding a 21 month-
old infant. She presented to emergency unit with a severely
painful left breast and fever. She noticed that symptoms start-
ed 22 days prior to admission with a dull pain the left breast.
The patient applied topical traditional medicinal herbs and oral
paracetamol for 18 days. While taking this treatment, the pain
rapidly worsened and she developed persistent fever and black
patches on breast skin. An ulcer also appeared on the upper
medial quadrant with a marked purulent discharge. On physi-
cal examination, the patient presented a high fever, Systemic
Inflammatory Response Syndrome (SIRS), blisters and complete
purulent necrosis of the left breast and long with a 2 cm ip-
silateral lenticular axillary lymphadenopathy (Figures 1 and 2).
Swabs for microbiology were taken from the discharging ulcer
before giving intravenous broad spectrum antibiotics to patient.
The patient’s laboratory results revealed leukocytes of 28, 230/
mm3 with an absolute neutrophil count of 26,380/mm3 with
no anemia or thrombocytopenia. C-reactive protein was 96
mg/l and the erythrocyte sedimentation rate was 20 mm/hr;
nevertheless, renal function and serum electrolytes were nor-
mal. No imaging was performed. Due to extensive necrosis, an
urgent simple mastectomy was performed with primary wound
closure. Intraoperative findings included large amount of pus
and complete necrosis of the mammary gland extending down
the pectoralis major fascia. The specimen histopathology
reported acute suppurative mastitis with extensive necrosis
of fibrofatty tissue and no underlying malignancy (Figure 3).
Analysis of microbiology cultures revealed the presence of both
streptococcus pyogenes and staphylococcus aureus. An antibio-
therapy was consequently adjusted according to the sensitivity
profile of antibiogram. Postoperatively, she had an unevent-
ful recovery and was discharged on postoperative day 5 after
extensive counseling, and was referred to a psychologist for a
psychological supportive care. She was seen in outpatients 1
month later with no issues and a well-healed wound.

Discussion

NF of the breast is a very rare condition and only a few case
reports have been published in the literature [10]. Most of the
cases described in the literature concern women over 30 years
old, presenting with major comorbidities such as cardiovascu-
lar diseases, alcoholic liver disease, immunosuppression, and
obesity [1,2,4-6,8,9]. We present the youngest case described
in the literature in a healthy woman. About 10% of cases oc-
cur in breastfeeding women as in our case report in which the
patient was breastfeeding a 21 month-old infant [3]. Inciting
events reported in the literature are traumatic injury, insect bite
and medical acts; yet, in this case, it was rather secondary to a
topical application of a traditional herbal medicine, and this is
the first such case reported in the breast [2,4,8]. Cases of NF fol-
lowing the use of herbal medicine have been previously report-
ed on the face, the neck and lower limb but not on the breast
[11,12]. Clinical signs of the disease is concordant between the
various case reports and consist of severely painful, swollen and
inflamed breast with fever, erythema, swelling, blisters, black
patches, crepitus and purulent discharge. SIRS is frequent and
ipsilateral axillary lymphadenopathy is inconstant [1-10,13,14].
As the symptoms are nonspecific, imaging is helpful in guiding the diagnosis. In our case, we didn’t perform any imaging because the results were not going to modify the emergency management. However, in other reports, breast ultrasound was systematically performed, while chest CT-scan, MRI and mammography were performed on a case-by-case basis depending on the initial presumptive diagnosis [3-5,8,9,13]. About causal germs, in our patient the infection was polymicrobial with Streptococcus pyogenes and Staphylococcus aureus. Streptococcus sp and Staphylococcus sp are the most frequently bacteria found in the literature as causal germs. Moreover, polymicrobial infections are more frequent than monomicrobial infections [1-5,7,9]. Nevertheless, Escherichia coli, Klebsiella pneumonia, Pseudomonas aeruginosa, Corinebacterium striatum, Clostridium septicum and Enterococcus sp have been reported as etiological agents by some authors [2,8,9,13]. The standard in the management of NF is fluid resuscitation, broad-spectrum antibiotics and urgent surgical debridement of non-viable tissue [2,4]. Konik and al in a systematic review reported total mastectomy as the most frequent surgical procedure performed to obtain source control, following by partial mastectomy and serial surgical debridement of the breast [2]. In this case, total mastectomy was performed and the specimen’s histopathological analysis revealed an acute suppurative mastitis with extensive necrosis of fibrofatty tissue without underlying neoplasia. This is consistent with the standard histopathological description of the NF of the breast [1,3,5-7,10,14].

Ultimately, although very rare, the NF of the breast is a dramatic reality. So that, it is critical to sensitize women not to use topical herbal medicine on the breast, because NF is a life-threatening disease and mastectomy is an aesthetic and psychological tragedy for a young woman in a context in which breast reconstructive procedures are not commonly accessible.

Conflicts of Interest: None.

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References


