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Necrotizing Fasciitis of the Breast after Topical Application of Traditionnal Herbal Medecine: 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 occured 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 occuring after topical application of traditional herbal medecine 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.

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 occured 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 occuring after topical application of traditional herbal medecine and the first case of

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breast's NF documented in Africa in a woman with no comorbidity 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 started 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 physical 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 ipsilateral 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 normal. 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 to 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 antibiotherapy was consequently adjusted according to the sensitivity profile of antibiogram. Postoperatively, she had an uneventful 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 cardiovascular 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 occur 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 following the use of herbal medicine have been previously reported 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].

Figure 1: Clinical image of the left breast on top view showing a completely necrotic skin surrounded by an ulcer with a purulent discharge.

Figure 2: Clinical image of the left breast in lateral view showing a completely necrotic skin surrounded by an ulcer with a purulent discharge.

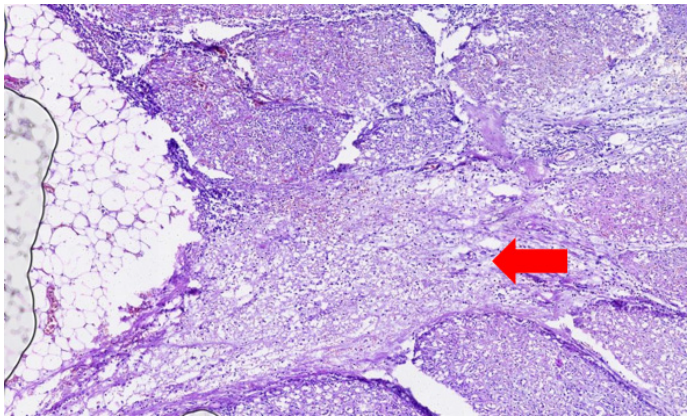

Figure 3: Histopathological image of the breast (×40, H&E stain) showing large areas of suppurative necrosis associated with vascular thrombosis.

As the symptoms are nonspecific, imaging is helpful in guiding the diagnostic. 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, broadspectrum 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 histopatological 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

1. Mersil M, Marzouk M, Labeeb H. Monomicrobial Necrotizing Fasciitis of the Breast: A Case Managed by Partial Mastectomy and Hydrogel Dressing. Cureus. 2021; 13: e17891.

2. Konik RD, Huang GS. Management of Primary Necrotizing Fasciitis of the Breast: A Systematic Review. Plast Surg (Oakv). 2020; 28: 215-21.

3. Maldonado G do C, Barbalho DM, Salum FCA, Vita MI da C, Belem RF, et al. Necrotizing fasciitis of breast in postpartum period: case report. Mastology. 2018; 28: 110-3.

4. Konik RD, Cash AD, Huang GS. Necrotizing fasciitis of the breast managed by partial mastectomy and local tissue rearrangement. Case Reports Plast Surg Hand Surg. 2017; 4: 77-80.

5. Fadaee N, Ong M, Al-Askari M. Necrotizing Fasciitis of the Breast: A Case Report and Literature Review. J Med Cases. 2019; 10: 288-92.

6. ALShareef B, ALSaleh N. Necrotizing Fasciitis of the Breast: Case Report with Literature Review. Case Reports in Surgery. 2018; 2018: e1370680.

7. Yang B, Connolly S, Ball W. Necrotising fasciitis of the breast: A rare primary case with conservation of the nipple and literature review. JPRAS Open. 2015; 6: 15-9.

8. Islam S, Aziz I, Shah J, Naraynsingh V, Harnarayan P. Necrotizing Fasciitis of the Breast Requiring a Life-Saving Mastectomy: A Case Report and Literature Review. Cureus. 2021; 13: e19886.

9. Yousfi J, Oumlil S, Benjilali L, Essaadouni L. Necrotizing Fasciitis of the Breast Underlying an Autoimmune Disease. Eur J Case Rep Intern Med. 2021; 8: 002434.

10. Molla YD, Kassa SA. Primary necrotizing fasciitis of the breast in a young patient, a case report. Int J Surg Case Rep. 2022; 102: 107844.

11. Almaguer Acevedo FM, Hernandez Cervantes BY, Ketemepi GVD, Martinez Lopez D. Cervicofacial necrotizing fasciitis after topical application of herbal medicine. J Surg Case Rep. 2021; 2021: rjab481.

12. Adigun IA, Nasir AA, Aderibigbe AB. Fulminant necrotizing fasciitis following the use of herbal concoction: a case report. Journal of Medical Case Reports. 2010; 4: 326.

13. McCamley C, Bozin M, Tasevski R, Mann B. Post-partum necrotizing fasciitis of the breast: A case study. ANZ J Surg. 2021; 91: 2214-5.

14. Britto LML de, Brasilino MCB, Souza THSC de, Monteiro MN, Oliveira SF de M, et al. Rare postpartum primary necrotizing fasciitis of the breast following mastectomy: Case report. Mastology. 2018; 28: 244-7.