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Primary Mammary Tuberculosis: About an Observation in Kara Teaching Hospital (Togo) and Review of The Literature

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ABSTRACT

***Background**: The mammary site is a rare site of extrapulmonary tuberculosis and poses the problem of differential diagnosis with breast cancer. We report one case in a postmenopausal HIV-negative woman.*

***Case report**: A 60-year-old woman had consulted for swelling of the left breast which had been evolving for about 4 months in a febrile context, without any notion of tuberculosis contagion and without any other tuberculosis foci. Physical examination revealed an inflammatory, indurated left breast about 15cm in diameter with an orange peel appearance, painful with irregular contours but without breast discharge and without axillary adenopathies. The hemogram showed hyperleukocytosis (15000/mm3) to neutrophilic polynucleosis (8200/mm3) and hyperlymphocytosis (6800/mm3). Histology of a skin biopsy had objectified a granulomatous inflammatory lesion made of epithelioid cells with caseous necrosis, rare giant Langhans cells as well as lymphoplasmocytes and patches of suppurated necrosis foci with sometimes altered neutrophil polynuclei. The intradermal tuberculin reaction was positive. The diagnosis of primary tubercular mastitis was therefore retained and the patient had been receiving anti tuberculosis treatment for six months during which time we noted a favorable evolution, without recurrence.*

***Conclusion**: This observation reports a case of mammary tuberculosis and raises the difficulty of differential diagnosis with breast cancer in a postmenopausal woman. It confirms the interest of histology in the diagnosis of these mammary tuberculoses, whose well-conducted antituberculosis treatment leads to a cure.*

Keywords

Tuberculosis, Breast, Menopause, histology, Kara (Togo).

Background

Tuberculosis, an infectious disease caused by Mycobacterium tuberculosis, also known as Koch's bacillus, has become a major public health concern worldwide, particularly in developing countries, especially in Southeast Asia and Sub-Saharan Africa [1]. Togo is a highly endemic country with an estimated incidence rate of 73 new cases per 100,000 inhabitants in 2012 [2]. The pulmonary form is the most common and diagnosis is based mainly on the isolation of acid-fast bacilli (AFB) resistant to direct sputum examination [2-5]. Extra-pulmonary forms represent a diagnostic problem for practitioners, and histology is an essential means of diagnosing these forms, which are becoming increasingly frequent [6]. The mammary localization first described by Astley Cooper in 1829 is a rare form of extra-pulmonary tuberculosis [7] and poses the problem of differential diagnosis with breast cancer because the clinic and imaging are not specific. We report a primitive inpatient case in Kara (Togo).

Case Report

A 60-year-old patient with no particular menopausal history and mother of 4 children was admitted for left breast swelling that had

been evolving for about 4 months in an infectious context treated by probabilistic antibiotic therapies without success. There was no notion of tuberculosis contagion. Physical examination revealed an inflammatory, indurated left breast about 15cm in diameter with an orange peel appearance (Figure 1), painful with irregular contours but without breast discharge and without axillary adenopathies. The right breast was free of abnormalities as was the rest of the clinical examination. The hemogram showed hyperleukocytosis at 15000 GB/mm^3 with neutrophil polynucleosis at 8200 PNN/mm^3 and hyperlymphocytosis at 6800 lymph/mm3. The mammogram performed four months ago showed normal volume, symmetrical, dense heterogeneous BIRADS type C breasts, moderate tone opacity with poorly defined contours of the inferior-external quadrant (EQ) of the left breast and an absence of suspicious structural abnormalities.

Figure 1: Inflammatory, indurated left breast about 15cm in diameter with an orange peel appearance.

Breast ultrasound revealed no skin lining abnormalities, a tissue formation in the QIE of the left breast at five o'clock and approximately 1.5 cm from the nipple measuring 22 mm x 13 mm (long transverse axis), of mixed structure with an echogenic and a hypoechoic portion with partially angled contours and discrete posterior reinforcement. The axillary areas were free. The lesion was classified as ACR4. A skin biopsy was performed and histology had objectified a granulomatous inflammatory lesion made of epithelioid cells with caseous necrosis, rare giant Langhans cells as well as lymphoplasmocytes and areas of suppurative necrosis foci with sometimes altered neutrophil polynuclear cells. Tuberculin TST was positive. HIV, viral hepatitis B and C serologies were negative. The diagnosis of primary tubercular mastitis was retained0 The patient was put on antituberculosis treatment for 06 months according to the national protocol: Rifampicin (10mg/kg/d) – Isoniazid (5mg/kg/d) -Pyrazinamide (30mg/kg/d) -Ethambutol (20mg/kg/d) for 2 months (2RHZE) and then Rifampicin (10mg/kg/d) – Isoniazid (5mg/kg/d) for 4 months (4RH) developed by the national tuberculosis control program in Togo. The evolution was favorable under this treatment without recurrence.

Discussion

This observation reports a primitive mammary tuberculosis in a 60 years old postmenopausal woman. Mammary localization of the tubercular disease is rare and is the least common visceral form even in highly endemic areas [8-10]. Its frequency varies from 0.06% to 0.1% of tuberculosis cases [11,12]. Indeed, one case was reported in 2014 in our country [13]. A case was also reported in Madagascar in 2015 [7]. Two cases were observed in Burkina Faso in 2012 [14] and in Mali in 2011 [15]. In Morocco, one case was observed in 2014 [16] and 2017 [17], and two cases in 2000 [18]. Sixty-five cases have been reported in Tunisia over 22 years, about 3 cases per year [10]. The rarity of this localization could be explained by breast tissue that is not very favorable to the development of BK [19]. Our patient was 60 years old and postmenopausal. Mammary tuberculosis can occur in both young and old women [10]. 10] However, it is mainly a problem in women of childbearing age. Pregnancy, lactation, and multiparity are risk factors [20]. However, men can also be affected [21]. Clinically, the duration of symptom progression in our patient was 4 months. It was 6 months in the patient of Rajaonarison et al in Madagascar [7]. Indeed, the delay between the first signs and the diagnosis of tuberculosis is quite long but often less than a year [22]. Satellite axillary adenopathies were absent in our patient. Indeed, they may be absent in some patients, but es [23]. Our infected patient's breast had an orange peel appearance that suggested breast cancer. However, histology showed a granuloma made of epithelioid cells with caseous necrosis in favor of tuberculosis, especially since the intradermal tuberculin reaction was also positive. This is further evidence of the importance of histology in the diagnosis of extrapulmonary tuberculosis. Therapeutically, our patient was declared cured after 6 months of treatment with tuberculosis drugs without recurrence. Indeed, the evolution of mammary tuberculosis under well-observed anti-tuberculosis treatment is towards complete cure and without sequelae in about 90% of cases [24].

Conclusion

Tuberculous mastitis is rare, especially in postmenopausal and elderly women. It can be replaced by carcinomatous mastitis. The diagnosis of certainty is based on the histology coupled or not with the bacteriological results, and also on the good response to tuberculosis treatment.

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