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## Primary tubercular mastitis in a pregnancy

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While tuberculosis, especially the pulmonary form is common; tuberculosis of the breast is extremely rare. The incidence of mammary tuberculosis is reported as less than 0.1% of all breast lesions in developing countries (1,2), and diagnosing it is difficult, especially during pregnancy. The signs and symptoms may resemble a malignancy or a non-specific breast abscess, thus labeled a great masquerader (1).

We report a pregnant woman with primary tubercular mastitis who was initially misdiagnosed as having breast abscess.

## 1. Case

A 31-year-old primigravid pregnant woman was referred to our perinatology unit at 28 weeks of gestation complaining of a painful lump in her right breast that had enlarged progressively over the previous three weeks, as well as new onset pelvic pain. Ultrasonographic examination revealed a single live fetus concordant with 28 weeks, and her pelvic examination revealed minimal cervical dilatation and effacement. A non-stress test revealed regular contractions. The patient was found to have mild fever, and her right breast was minimally enlarged and appeared mildly erythematous when compared to the other side. She had a firm and tender 3–4 cm lump in the upper outer quadrant of the right breast. There was no skin retraction or nipple discharge, and no lymph nodes could be palpated in the axilla or in the cervical region. There was no history of cough or weight loss. The breast ultrasonography revealed a 4 cm complex cystic mass in her right breast. The patient was hospitalized for preterm labor and breast abscess.

No family history of breast malignancy was recorded. The patient's routine blood tests were found to be within normal limits; however, the erythrocyte sedimentation rate was 36 mm/h. Based on these findings, a provisional diagnosis of pyogenic breast abscess was made,

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and antibiotic treatment was initiated. In addition, tocolytic treatment with nifedipine was started for preterm labor. The breast mass persisted after six days of antibiotic treatment, and a fine-needle aspiration biopsy was performed for suspected inflammatory breast cancer. After the biopsy, the patient was discharged from the hospital at her request.

Three weeks later, she was readmitted with generalized swelling, multiple ulcerated lesions, and discharging sinuses on her right breast (Fig. 1). A histopathological examination revealed features of mastitis with epithelioid histiocytes and Langhans giant cells and was characterized by the presence of revealed granulomas with central caseous necrosis, which suggested tuberculous granulomatous inflammation; it was negative for neoplastic cells. Sputum and urine culture were negative. Chest X-ray radiograph was normal. After confirmation of the primary tubercular mastitis diagnosis, the patient received anti-tuberculosis drug therapy that included rifampin, isoniazid, pyrazinamide, and ethambutol plus vitamin B6 at 31 weeks of gestation.

The patient underwent cesarean section at 35 weeks for preterm labor and breech presentation. She delivered a healthy baby girl who weighed 2300 g. There was no macroscopic lesion related to the tuberculosis in her abdomen at the cesarean section.

Vitamin K was administered to the infant at birth. She didn't breast-feed her baby. The baby received the isoniazid preventive therapy daily for 6 months after tuberculosis disease was excluded. The whole ulcer healed completely at 3 months and anti-tubercular medication was given 6 months. There has been no recurrence after 12 month follow-up. She and her baby are doing well at present.

## 2. Discussion

Tuberculosis is an endemic disease worldwide, and breast tuberculosis is most frequently seen in women who have given birth and are breast-feeding (2). The rarity of tuberculosis of the breast could be attributed to the possibility that mammary tissue may offer resistance to the survival and multiplication of tubercular bacilli (3). While it may be primary or secondary, mammary tuberculosis is more commonly secondary to the focus by lymphatic, hematogenous, or rarely, direct spread (4). Tuberculosis of the breast during pregnancy has rarely been reported in the literature, especially the primary form (5,6). Our case was primary mammary tuberculosis. Because there was no finding of another focus on physical or radiological examination nor there was prior history of tuberculosis.

Mammary tuberculosis can be confused with many other diseases, such as malignant or benign breast masses, granulomatous mastitis, and actinomycosis. Predominant clinical symptom of tuberculous mastitis is a breast lump with or without a discharging sinus. Differential



**Fig. 1.** Generalized swelling and hyperpigmentation of the right breast with multiple discharging sinuses.

diagnosis of actinomycosis should be considered in patients presenting with mammary masses and sinuses. Characteristic sulfur granules on histopathology make the diagnosis of actinomycosis (5,6). High suspicion is the main point for making a diagnosis, as radiological imaging

is not diagnostic, as seen in this case. Management of the disease with medical drugs should be tried first. Rifampicin, isoniazid, pyrazinamide, and ethambutol are the basis of breast tuberculosis treatment (2–4). Surgery should be reserved for medical treatment-resistant cases. In endemic areas, tuberculosis should always be considered in the differential diagnosis of an inflammatory breast mass.

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