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Case Report Open Access

Mastitis Neonatorum: An Interesting and Uncommon Condition Seen in Infants

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Abstract

A 21 day old male infant was admitted to NICU with swelling of right breast and fever from last 3 days. Baby had documented fever of 101°F at the time of admission. Baby was exclusively breast feed with no history of decrease acceptance of feed.

Keywords: Breast; Neonatal sepsis

Introduction

Mastitis neonatorum is the infections of the breast tissue that predominantly occurs up to the age of two months. It is usually local inflammation and unilateral. It is a very uncommon condition resulting when the breast is squeezed to remove the milk (witch's milk) which usually comes out of the breast because of the maternal oestrogen effect.

Figure 1: Figure showing enlargement of the right breast with size of 5 × 5 cm and having redness and erythema.

Case Report

A 21 day old male infant was admitted to NICU with swelling of right breast and fever from last 3 days. Baby had documented fever of 101°F at the time of admission. Baby was exclusively breast feed with no history of decrease acceptance of feed. Examination showed enlargement of the right breast with erythema, tenderness and having size of 5 × 5cm. Contralateral breast was normal with neither being erythematous nor tender (Figures 1 and 2). There was oozing of milk from the breast from the last few days. Mother gave a history of squeezing the breast when there was slight swelling of breast with milk discharge. Baby was treated with analgesic (paracetamol drops) and antibiotic (cefotaxime) and was discharged in good condition.

Figure 2: Figure showing enlargement of the right breast with size of 5 × 5 cm and having redness and erythema.

Discussion

Mastitis neonatorum is the infections of the breast tissue that predominantly occurs up to the age of two months. It is usually local inflammation and unilateral. It is a very uncommon condition resulting when the breast is squeezed to remove the milk (witch's milk) which usually comes out of the breast because of the maternal

oestrogen effect. It is seen with equal incidence in both the sexes [1]. The risk factor for neonatal sepsis are clinical chorioamnionitis (fetal tachycardia, uterine tenderness, malodorous vaginal discharge, maternal leucocytosis (TLC>15,000), maternal fever, maternal urinary or other systemic infection, prolonged rupture of membrane (>18 h), >3 clean vaginal examination or single unclean vaginal examination, and inadequate intrapartum antibiotic to mother. The major risk factor for mastitis neonatorum is stimulation of the breast by estrogens hormone from placenta and mother resulting in physiologic breast hypertrophy in full term infants followed by spread of pathogenic bacteria from the skin and/or mucous membranes to the breast parenchyma through the nipple via repeated compression of the breast to squeeze the milk. The other source of infection is maternal skin or soft-tissue infection in the postpartum period or neonatal specticemia. The most common organism involved are as follows [2,3].

1. *Staphylococcus aureus*,
2. *Escherichia coli*,
3. Salmonella,
4. Anaerobes
5. Group B Streptococcus

Clinically infants have features of inflammation that is Calor, dolor, rubor and tumor meaning heat, pain, redness, and swelling respectively. Occasionally there may be purulent discharge from the nipple, and/or fluctuation suggestive of breast abscess or there may be axillary lymphadenopathy [4]. Systemic signs which are rarely seen includes fever, vomiting, refusal of feeds, irritability and lethargy. The diagnosis is predominantly clinical but these neonates are to be evaluated for systemic sepsis. Investigations, which are to be done includes sepsis works up including total leukocyte counts, CRP, blood culture, culture of breast discharge and ultrasound of the swelling [5].

The ultrasound finding of mastitis neonatorum includes prominence of breast buds of the affected side, ill-defined edges and with increased echogenicity either focal or diffuse in comparison to normal neonatal breast. There is thickening of the surrounding subcutaneous tissue with increases in blood flow on colour Doppler [6].

Treatment includes antibiotics (oxacillin, vancomycin, clindamycin or third generation cephalosporins) and analgesics. If an abscess occurs, needle aspiration is performed. Surgical drainage is considered when a needle aspiration is unsuccessful because an operation may damage the breast bud and result in reduction of adult breast size [7,8].

Neonatal mastitis can be complicated by extensive cellulitis, necrotizing fasciitis, and osteomyelitis. Neonatal mastitis may affect future development of the breast on the involved side, hence the treatment must be optimized and this condition must be adequately treated as this can have long term implications in the future neonatal life [9,10].

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