



Sonomammography in Neonatal Mastauxe

Neonatal Meme Büyümesinde Sonomamografi

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ABSTRACT

Prominence or even enlargement of one or both breasts is known in neonates. It is believed to be a physiological response to falling levels of maternal estrogen towards last trimester of pregnancy. This input stimulates prolactin release from the newborn's pituitary leading to transient neonatal breast enlargement. This phenomenon is independent of the gender of the neonate. It presents in the first few weeks of life and resolves subsequently. Often fluid discharge is noted from the prominent or swollen breast that resolves without treatment in subsequent weeks. Manual breast manipulation for discharge removal may lead to undesirable effects like local irritation, enhanced enlargement, prolonged tissue hypertrophy or even mastitis. A case of such 7-days female neonate is presented here backed with imaging evaluation for confirmation of diagnosis. Typical sonomammographic findings are described.

Keywords: Neonatal Mastauxe; Breast; Neonate; Imaging; Sonomammography.

ÖZET

Yeni doğanlarda bir veya iki memenin büyümesi rastlanabilir bir durumdur. Bu durumun gebeliğin son üç ayında düşük östrojen seviyelerine cevap olarak oluştuğuna inanılır. Bu input yeni doğanın hipofiz bezinden prolaktin salınımını uyarak yeni doğanda geçici meme büyümesine yol açar. Bu olgu yeni doğanın cinsiyetinden bağımsızdır. Bu durum yaşamın ilk bir kaç haftasında ortaya çıkar sonrasında zamanla normal haline döner. El ile memedeki şişliğin boşaltılmaya çalışılması ise lokal iritasyon, büyümenin artması, hipertrofinin uzun sürmesi veya mastitin oluşması gibi istenmeyen etkilere yol açabilir. Burada cinsiyeti kız olan yedi günlük bir yenidoğan vakası sunulmaktadır ve çalışmamızda uygulanan görüntüleme yöntemide daha önce konulan teşhisi desteklenmektedir.

Anahtar kelimeler: Yeni doğanda meme büyümesi, meme, yenidoğan, görüntüleme, sonomamografi.

INTRODUCTION

Prominence or even enlargement of one or both breasts is known in neonates. It is believed to be a physiological response to falling levels of maternal estrogen towards last trimester of pregnancy. This input stimulates prolactin release from the newborn's pituitary leading to transient neonatal breast enlargement. This phenomenon is independent of the gender of the neonate. It presents in the first few weeks of life and resolves

subsequently. Often fluid discharge is noted from the prominent or swollen breast that resolves without treatment in subsequent weeks. Manual breast manipulation for discharge removal may lead to undesirable effects like local irritation, enhanced enlargement, prolonged tissue hypertrophy or even mastitis. A case of such 7-days female neonate is presented here backed with imaging evaluation for confirmation of diagnosis

CASE

A neonate of 7 days age was referred for ultrasound evaluation of right breast. Parents informed that they had noticed the child's right breast being larger than the left since birth. It was insidious in onset and was gradually progressive. Of late they found that some colorless secretions could be expressed from right breast on manual compression.

She was born at full term by normal vaginal delivery and had normal Apgar scores. She was conscious and active. She was feeding well and showed no signs of discomfort or irritability.

Local examination revealed prominent right breast [Figure 1 A and B]. No local signs of inflammation or trauma were noted. There was no tenderness. Minimal colorless discharge was expressed on manual compression.

Grey scale ultrasound [Figure 1C] showed enlarged right mammary parenchyma [34 x 18 mm] almost thrice the size on normal left mammary parenchyma [11 x 7 mm]. Few anechoic cystic spaces were seen in the breast tissue bilaterally. No solid mass was noted. No probe tenderness was seen. Color Doppler study [Figure 1D] did not demonstrate any abnormal vascularity in or around the breast parenchyma.

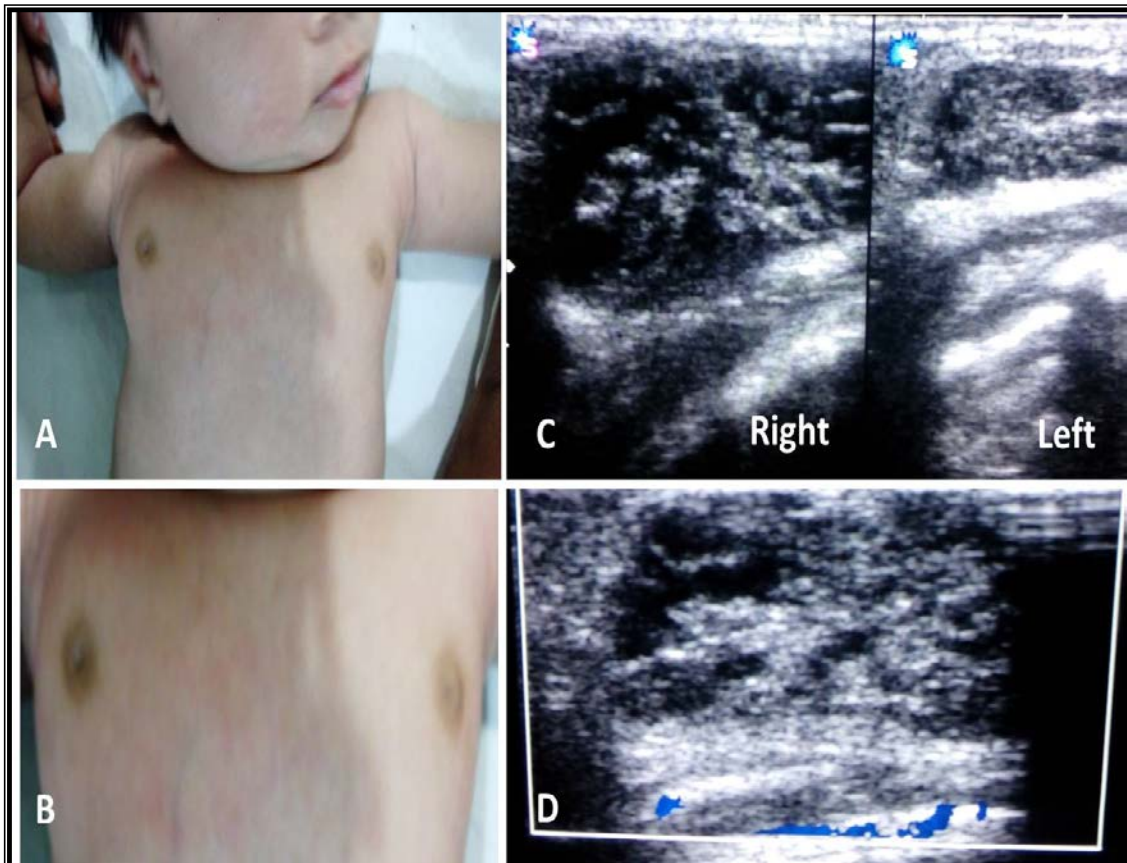


Figure 1 A and B. Local examination of thorax showing prominent right breast. No local signs of inflammation or trauma were noted. **Figure 1C.** Grey scale ultrasound showed enlarged right mammary parenchyma almost thrice the size on normal left mammary parenchyma. Few anechoic cystic spaces were seen in the breast tissue bilaterally. No solid mass was noted. **Figure 1D.** Color Doppler study showed no abnormal intra mammary or surrounding vascularity.

DISCUSSION

In about 70% of neonates, prominent breasts may be seen immediately after birth as a response to maternal estrogen¹. Normal neonatal breast buds are 10 to 20 mm wide². Due to progressive reduction of maternal estrogen following delivery, neonatal pituitary responds by prolactin secretion^{1,4}, which in turn causes mammary enlargement and even milk secretion in 5 to 20% of newborn^{5,6}. Incomplete emptying results in retention causing galactocele formation, which might get infected leading to mastitis and even abscess⁷.

Neonatal mastaxue is term used to mean the uncomplicated physiological breast enlargement in newborn under hormonal influence. When complicated by additional conditions it is known as "neonatal mastitis", "neo-natal breast abscess" and "neonatal galactocele"². On inspection local induration, redness and tenderness are seen in both- mastitis as well as mastaxue, but systemic manifestations like fever and extension of lesion beyond margins of breast helps to separate mastitis from mastaxue. Answer to this clinical dilemma has significance as antibiotics are prescribed in mastitis but not in mastaxue². Sonomammography in mastitis showed increased echogenicity of breast buds than those in mastaxue⁸. Increased peripheral vascularity is characteristic of mastitis whereas mastaxue may show minimal or no vascularity. Retention of secretions might give a breast cyst⁹ like appearance as in adults or even as an adenoma¹⁰.

Treatment of Neonatal mastaxue rests on the adage of "wait and watch" policy. Proper parental counseling and reassurance are vital. Repeated manual removal of secretions may lead to

prolonged milk secretion and can even lead to infection¹¹.

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