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CASE REPORT

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Bilateral Galactocele in a Male Infant

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Abstract: Temporary breast enlargement may be seen in normal newborn and adolescent boys. Cysts of the breast are uncommon in childhood. Galactocele, defined as an encysted collection of milk products, is an extremely rare cause of breast enlargement in infants and children. We herein report a male infant with bilateral galactocele who was otherwise healthy, and we also review the literature.

Key Words: Galactocele, child

Bir Erkek İnfantta İkitaraflı Galaktosel

Özet: Sağlıklı yenidoğan ve adölesan erkek çocukların meme dokularında geçici büyümeler oluşabilir. Meme dokusunda büyümeye yol açan kistik oluşumlar, çocukluk çağında nadiren görülür. Meme dokusunda süt kaynaklı kistik oluşum olarak tanımlanan galaktosel, süt çocukluğu ve çocukluk yaş grubunda saptanan meme büyümelerinin son derece nadir bir nedenidir. Bu yazıda her iki meme dokusunda galaktosel tespit edilen ve altta yatan başka bir hastalığı bulunmayan bir erkek sütçocuğu sunulmuş ve galaktosel için literatür gözden geçirilmiştir.

Anahtar Sözcükler: Galaktosel, çocuk

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Introduction

Galactocele, defined as an encysted collection of milk products, is an uncommon breast lesion. It is a rare cause of breast enlargement in infants and children (1,2). The etiology of galactocele in childhood is unknown. We herein report a male infant with bilateral galactocele who was otherwise healthy, and we give a brief literature review.

Case Report

A seven-month-old male infant was brought to our clinic with a four-month history of bilateral progressive breast enlargement. He was born at term after an unremarkable pregnancy. There was no history of nipple discharge, trauma, infection, maternal medication, contact with estrogen products, or familial breast problems.

On physical examination, his weight, height and head circumference were 10,200 g (75th percentile), 70 cm (50th percentile) and 44 cm (50th percentile), respectively. The left breast was 6 × 4 cm and the right 4 × 3 cm in size. The nipples and areolas were normal and no inflammation was noted (Figure 1). Both breasts were cystic and nontender with palpation. No nipple discharge was evident. The external genitalia were normal. Both testes were normal in size and present in the scrotum. There was no sign of hirsutism, pigmentation of the skin or other endocrinologic abnormalities.

Laboratory investigations including complete blood count, blood glucose, serum electrolytes, renal and liver function tests, serum lipid profile, and urinalysis were within the normal limits. The serum hormone levels were as follows: luteinizing hormone 0.17 mIU/ml, follicle-stimulating hormone 0.4 mIU/ml, estradiol <20 pg/ml, total testosterone <20 ng/dl, prolactin 29 ng/ml, total thyroxin 10.1 µg/dl, free thyroxin 1.36 µg/dl and thyroid-stimulating hormone 0.9 mIU/ml. All the serum hormone concentrations were also within the normal range.

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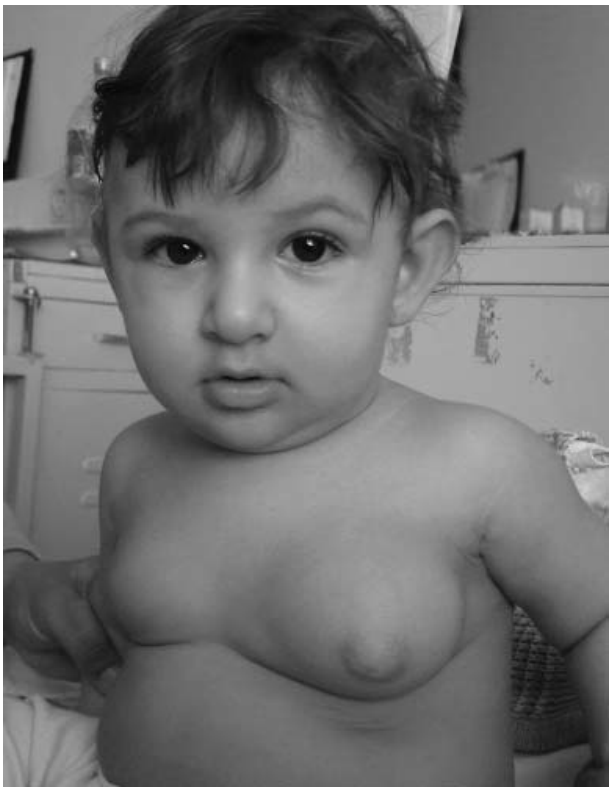

Figure 1. Bilateral breast enlargement.

Bone age according to Greulich and Pyle was consistent with six months. Chromosomal analysis showed a normal male karyotype 46, XY. Plain chest radiography and magnetic resonance (MR) mammography were normal. Ultrasonographic examination of the breasts revealed hypoechoic and highly echogenic cystic areas, compatible with galactocele. The cystic mass was removed bilaterally by surgical exploration. Histopathologic examination of the mass showed the cyst to be lined by simple columnar epithelium and surrounded by a fibro-adipose tissue and confirmed the diagnosis of galactocele (Figure 2). The patient was followed up to six months and did not show recurrence.

Discussion

Galactocele is an extremely rare cause of breast enlargement in males (1-3). Except for a 75-year-old male, all previously reported cases were diagnosed in infants and children (4). Pettinato et al. (4) and Bower et al. (5), who reviewed 320 infants and children with breast lesions, determined unilateral galactocele in only three male children with ages of 12 months, 21 months and 6 years. Galactocele in infants and children are usually unilateral but may be bilateral (6). The etiology of galactocele in infants is unclear. However, it has been reported that galactocele may be associated with three factors: 1) previous or present stimulation by prolactin; 2) presence of secretory breast epithelium; and 3) some form of ductal obstruction (7,8).

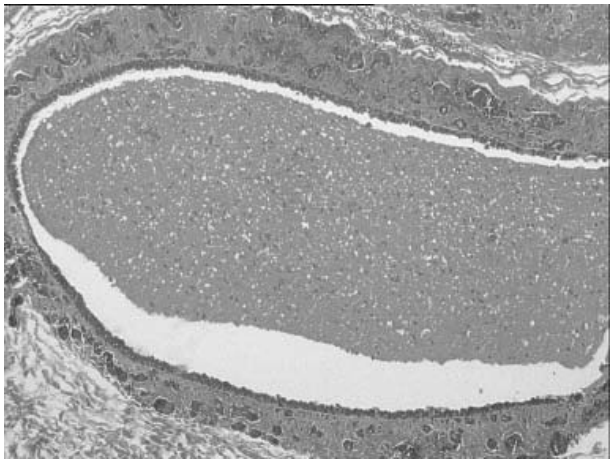

Figure 2. The cyst wall lined by apocrine-type epithelium (hematoxylin and eosin stain, X 40).

Galactocele is a generally unique clinical feature. However, it may be associated with some endocrinologic abnormalities. Recently, Rahman et al. (9) reported a case with galactocele associated with congenital hypopituitarism. Classical clinic presentation of the cases is progressive painless enlargement of the breast. Nipple discharge was reported in one case (8). On physical examination, a fluctuant, soft, mobile and nontender mass in the breast is usually determined, as found in our case.

Gomez et al. (10) described the mammographic features of galactocele in adults. Nevertheless, there is no specific mammographic finding in children with galactocele. Ultrasound shows the echo-lucency of the upper fluid and the high echogenicity of the lower component, together with a radiographic density lower than that of water, which represents the fat content of the milk products. The persistence of the line separating both components suggests two non-miscible fluids, with the upper fluid having a lower specific gravity (fat) than the lower (milk) (1). In our patient, hypoechoic and highly echogenic cystic areas that were compatible with galactocele were revealed by ultrasonographic

examination. In addition, aspiration of milk-like fluid may be the primary clue for the diagnosis. However, diagnosis of galactocele requires presence of a true cyst of the breast lined by cuboidal epithelium containing milk-like fluid with or without curd-like material (11). We determined similar histopathologic findings in the microscopic examination of the mass (Figure 2).

The treatment of galactocele is surgery and simple excision is curative in all patients (7,8,11).

In conclusion, although galactocele is rarely seen, physicians should consider the possibility of this lesion in presence of a soft, mobile and nontender mass in the breast of infants and children.

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