Galactocele in a male child
Published on 11.04.2015

DOI: 10.1594/EURORAD/CASE.12613
ISSN: 1563-4086
Section: Breast imaging
Area of Interest: Breast
Procedure: Diagnostic procedure
Imaging Technique: Ultrasound
Special Focus: Cysts Pathology Case Type: Clinical Cases
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Patient: 3 years, male

Clinical History:
A 3-year-old male child presented with a painless right breast mass, which had increased gradually during a year. There were neither inflammatory signs nor nipple discharge. Both testes were present in the scrotum, and they were of normal size. Laboratory investigations involving endocrinologic evaluation were normal.

Imaging Findings:
The child was referred for evaluation of a lump in his right breast. The ultrasound examination showed a well-defined cystic mass in the right breast anterior to the major pectoral muscle, measuring 5 x 2 cm (Fig. 1). The cyst was unilocular, without internal septations and had internal mobile echoes. No intracystic solid lesions were seen.

The left breast was normal.

Discussion:
A galactocele is defined as a cystic lesion filled with milk or milk-like fluid [1]. Most galactoceles are seen in young women during or after lactation [2]. These lesions are rare in children, and there are only a few cases reported in male infants [3-8].

The aetiology is unclear, and it is thought to be multifactorial [1-6]. The main factors described are: breast stimulation by prolactin, presence of secretory breast epithelium and ductal obstruction.

The typical presentation is a progressive enlargement of the breast. A fluctuant, mobile, well-defined, nontender breast mass is seen on physical examination. Two cases with nipple discharge have been described [9, 10]. Even though in most cases galactocele is the unique clinical feature, there are reported cases of galactoceles associated with congenital abnormalities and endocrinologic disorders such as hyperprolactinaemia [2, 9, 11], hypopituitarism [12] and hypothyroidism [13].

Breast galactoceles are usually unilateral, although Vlahovic et al, after reviewing the literature, reported that 30% occurred bilaterally [6].

Palpable breast masses are a rare complaint in male paediatric patients and ultrasound is the primary mode to characterize them [7, 8]. On ultrasound galactoceles appear like cysts that are single or multichambered. Depending on the consistency of the milk in the galactocele, the content can be anechoic or hypoechoic, homogeneous or inhomogeneous, and good distal enhancement is usually present. There are no specific mammographic findings in children [3]. MRI may be useful for further characterization of unusual masses [8].

Lymphangiomia is usually the initial diagnosis [5, 6, 14, 15], as it was in our case. The mass was resected and the pathologic report described a 4.5 cm cystic mass and fluctuating surface. It was filled with milky liquid. The wall was thin, of 0.3 cm. The tumour was surrounded by a fibroadipose tissue and lined by monostratified, cuboidal
epithelium, which showed focally secretory changes (Fig. 2). It showed positivity to cytokeratins (AE1-AE3) (Fig. 3) and CK 18 and negativity to vascular marks (CD31, CD34 and D2 40). These findings are consistent with an epithelial lesion, discarding lymphangioma as a diagnosis.

The simple surgical excision is curative in all patients [3-6, 10-14]. Fine-needle aspiration could be used as a diagnostic method and it has also been reported as another modality of treatment [1, 2].

In conclusion, galactocele is a rare entity that should be included in the differential diagnosis of progressive enlargement of the breast in a male child.

Differential Diagnosis List: Unilateral galactocele in a male child., Lymphangioma, Haemangioma

Final Diagnosis: Unilateral galactocele in a male child.

References:


Figure 1

Description: Ultrasound examination of the right breast showed a well-defined cystic mass. Origin: Department of Radiology, Hospital Universitario Lucus Augusti, Lugo, Spain
Description: A cyst with simple, cuboidal epithelium showing secretory changes. Origin: Department of Pathology, Hospital Universitario A Coruña, A Coruña, Spain
Description: The epithelium of the cyst is cytokeratin (AE1- AE3) positive, discarding lymphangioma
Origin: Department of Pathology, Hospital Universitario A Coruña, A Coruña, Spain