

Case Report

Giant Juvenile Adeno-Fibroma: A Case Report

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Abstract: We report the case of a 14-year-old girl, who consulted for a painful left breast swelling of gradual onset and progressively increasing in size. A breast ultrasound scan was done with a preliminary diagnosis of adenofibroma, and a phyllode tumor as differential diagnosis. A tissue sample of the tumor mass after surgical excision was sent for histopathology and the diagnosis of a giant adenofibroma was confirmed. Short term follow-up of the patient was unremarkable. The postoperative course was simple.

Key words: Giant juvenile adeno-fibroma, breast, ultrasound.

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INTRODUCTION

Juvenile giant adeno-fibroma is a rare condition [1], corresponding to an adenofibroma larger than 5 cm, which usually appears between 11 and 20 years of age [2]. Clinically, it presents as a rapidly growing, relatively firm, regular, mobile breast lesion without associated axillary or supraclavicular adenomegaly [3] and may be mistakenly associated with other conditions such as phyllode tumor and gigantomastia [4]. Breast ultrasound allows the diagnosis to be evoked, which will be confirmed by histology, after a lumpectomy that is usually satisfactory [5]. We report a case of a giant left breast adeno-fibroma in a 14-year-old girl, complaining of a painful left breast swelling, evolving for nearly 5 months.

CASE REPORT

The present case is that of a 14 year old girl, taken for a gynecological consultation by her parents for a painful swelling of the left breast that has been

evolving for nearly 5 months, with no particular antecedent. Her physical examination made it possible to find a left breast increased in size, seat of a firm mass mobile in relation to the different plans located at the union of the upper quadrants, not very sensitive to palpation, with discreet inversion of the nipple and not associated with auxiliary adenomegaly. An ultrasound coupled to Doppler was performed by a radiologist, using a DC-6T device from MINDRAY, using the linear and convex probes, respectively of high and low frequency. It objectified an oval mass (79 x 32 x 76 mm, i.e. a volume of 10.5 ml), located in the QSE with clear limits, and with a long axis parallel to the skin plan. It is heterogeneous hypoechoic with a few echogenic spots, and presents a posterior enhancement of ultrasound without significant arteriovenous vascularization on Doppler (Figure 1). A therapeutic procedure consisting of a nodulectomy was performed after a fine needle aspiration, followed by a cytological analysis. The histopathological study of the operative specimen (Figure 2) confirmed the diagnosis of adeno-fibroma peri-ductal.

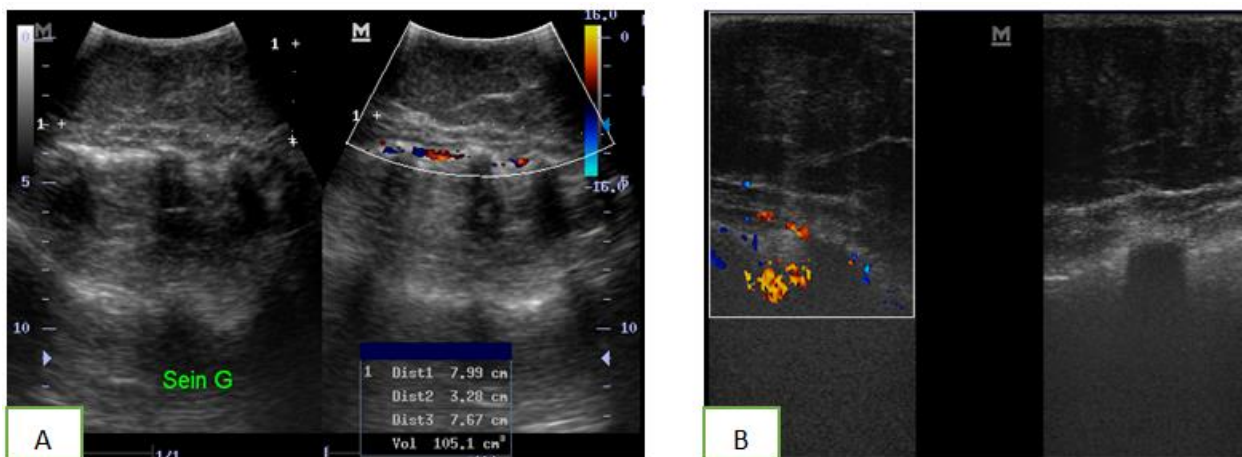


Figure 1: Ultrasound images, B mode and color Doppler mode, with convex (A) and linear (B) probes: Well-delineated oval left breast mass, with long axis parallel to the skin plane, heterogeneous hypoechoic with some echogenic spots, and moderate posterior ultrasound enhancement. Absence of significant arteriovenous vascularization on Doppler



Figure 2: Photographic image of the breast mass after local excision in the operating room

DISCUSSION

Juvenile giant adenofibroma is a rare form of adenofibroma (2-4%) [4], being twice as common in young African American subjects [3]. This pathology is usually discovered through self-palpation [5], the regular practice of which is highly recommended in our setting [6]. Adeno-fibromas occur preferentially in the peripubertal period, growing rapidly, with a size greater than 5 cm, hence the term "giant" [1]. A recent meta-analysis of 152 articles involving 153 patients reported a mean age of 16.7 years, with a mean lesion size of 11.2 cm [7]. Adeno-fibromas are usually found in the first year of life. Generally, adeno-fibromas are the most common breast mass in adolescents (68.3%) according to Neinstein [8], and are probably due to an abnormal response to excessive estrogenic stimulation [9].

Clinically, it is usually a tumor discovered incidentally by self-palpation, single, firm, unilateral, and deforming the breast [5]. However, due to the volume, the adenofibroma may present some signs of malignancy such as orange peel, nipple inversion, dilation of superficial veins [10] and skin ulceration related to pressure necrosis [2]. The main pathological entities to be considered as differential diagnoses are phyllodes tumor, virginal hypertrophy, and infectious phenomena [11].

With regard to paraclinical examinations, imaging plays an important role, particularly ultrasound coupled with Doppler, which is the first-line examination in general for breast pathology in young subjects [5] and has a negative predictive value of 99.5% regarding the malignancy of the adenofibroma [12]. It allows to objectify an oval or round mass, well circumscribed, with a large axis parallel to the skin, hypoechoic, homogeneous, with more often a posterior reinforcement. This mass may be avascular on color Doppler, or show minimal internal vascularity in 67% of cases [5]. As for MRI (magnetic resonance imaging) allows estimation of the volume of the mass, assessment of its topography, and differentiation of vascular lesions from normal breast tissue [5]. However, mammography is not very useful in this age group because of the high breast density and the risk of high radio sensitivity [7, 12]. However, several authors agree that no imaging modality can reliably differentiate between giant adenofibroma and phyllodes tumor [2, 7, 13].

Some authors consider that cytopuncture is not necessary [7, 14], while other authors consider it essential before surgery [5, 9]. The treatment of choice for adenofibroma is to be based on the following criteria.

The treatment of choice for adenofibroma is surgical, consisting of local excision [11], the diligence of which allows for the preservation of skin elasticity [15]. Recurrence is considered rare in solitary cases and has been reported in cases of multiple juvenile adenofibromas [11].

CONCLUSION

Juvenile giant adenofibroma is a rare form of adenofibroma, larger than 5 cm, affecting the adolescent female, and most commonly of African American origin. It should be investigated by imaging, primarily breast ultrasound, which is suggestive. This examination also allows discussion of the characteristics of a phyllodes tumor, which is the main differential diagnosis. The management of this pathology is usually surgical, with aesthetic preservation of the breast.

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