

Fibroadenoma juvenil giant it's clinical, histological and radiological findings- case report

Abstract

The most common benign tumor in adolescents and young women is fibroadenoma. It is called juvenile fibroadenoma when it occurs in children and adolescents between 10 and 18 years of age, which accounts for only 4% of total fibroadenomas. A case of a 14-year-old female with palpable mass in the right breast, negative family history of breast cancer or any significant pathology was reported. Histopathologic diagnosis of juvenile fibroadenoma was confirmed, being a rare variant called juvenile giant fibroadenoma. The purpose of the case report was to emphasize that fibroadenomas represent a challenge for physicians since treatment guidelines are lacking in this population and although juvenile fibroadenoma is not a pre-malignant condition, it is associated with an estimated malignant transformation risk in less than 0.3%.

Keywords: breast, fibroadenoma, core biopsy, adolescence, mamillary secretion

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John Nascimento da Conceição Médico,¹
 Ritamaris de Arruda Régis,² Ana Elisa de
 Carvalho,¹ Fernanda de Figueiredo Arruda
 Rizzo,³ Loren Gessica dos Santos,¹ Madson
 Silva,¹ Souza Médico¹

¹Federal University of Mato Grosso, Brazil

²Radiologist, Júlio Muller University Hospital, Brazil

³Medical Pathologist, Federal University of Mato Grosso, Brazil

Correspondence: John Nascimento da Conceição Médico,
 Federal University of Mato Grosso, Brazil,
 Email johnnascimento25@gmail.com

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Introduction

Breast masses in childhood and adolescence are uncommon, mostly resulting from inflammatory processes secondary to infection and benign tumors. The most common benign tumor in adolescents and young women is fibroadenoma, being called juvenile fibroadenoma when it occurs in children and adolescents between 10 and 18 years of age.¹ There is also a rare variant that is the giant fibroadenoma characterized by a rapid growth of the tumor with a mass bigger than 5 cm and or weight greater than 500g. Juvenile fibroadenoma accounts for only 4% and giant fibroadenomas accounts for only 0.5% of total fibroadenomas and can occur from menarche to senectude, but it is common between 20 and 30 years of age. The diagnosis is essentially clinical, presenting as a single or multiple, mobile, well delimited, unadged, lobulated, slow-growing tumor with a higher occurrence in the supero-lateral quadrant, usually painless and fibroelastic consistency.²

Case report

A female patient, 14 years old, presented to our radiology department of the Júlio Muller-HUJM University Hospital with a palpable painless mass in the right breast. She had no family history for breast cancer or any significant pathology for the case. He denied history of trauma, fever, mamillary secretion and anorexia and weight loss. Menarca age at 12 local examinations showed a hardened mass, not adhered to the deep planes located at the junction of the medial quadrants of the right breast, well delimited, with skin without phlogistic signs, bulging or retractions and negative mammary expression, examination of the left breast without changes.

The ultrasound examination of the right breast on 09/13/2017 demonstrated the presence of oval, hypoechoic formation with clear and well defined limits, with parallel orientation to the skin, without shadow or posterior acoustic reinforcement, circumscribed, in topography of 3 hours, approximately 5 cm from the nipple and 1.2cm from the skin, measuring 3.0x2.5x1.0cm in their diameters (BI-RADS, category 3). A biopsy was performed on core biopsy on

05/21/2018, confirming the diagnostic suspicion of fibroadenoma by histopathological evaluation.

Discussion

Fibroadenomas are the most common mammary masses in adolescents and pose a challenge for physicians, since treatment guidelines are lacking in this population.³ Fibroadenoma arises from a stromal and epithelial proliferation of the terminal ductolobular unit, although there are several histological variants. They are usually 2 to 3 cm in size.³ The term juvenile fibroadenoma is for tumors that occur in the age group of 10 to 18 years, responsible for 4 to 8% of all fibroadenomas. There is also a rare variant that is the giant fibroadenoma characterized by a rapid growth of the tumor with a mass greater than 5 cm and / or weight greater than 500 g, responsible for 0.5% of all fibroadenomas.^{3,4} The reported case fits this type of variant, giant juvenile fibroadenoma with thirteen centimeters in diameter with growth at 9 months. The diagnostic criteria for juvenile fibroadenoma are 8: circumscribed and rarely multiple; mixed, epithelial and stromal component, with preferentially pericanalicular growth pattern; absence of atypia in the stromal and glandular components and higher mitotic index 3/hpf (high power field); epithelial and myoepithelial hyperplasia frequently; age range between 10-20 years, with a peak incidence at 15 years.⁵ Although juvenile fibroadenoma is not a pre-malignant condition, it is associated with a risk of malignant transformation, estimated at less than 0.3%.⁶

In the diagnostic investigation, mammography has limited role due to the high density of the breast. Ultrasonography was superior to mammography in the exclusion of malignancy with a negative predictive value of 99.5%.⁷ The tissue biopsy is essential for the diagnosis of major injuries are often misdiagnosed as phyllodes tumors with low risk malignidade⁹. Fine needle aspiration biopsy (FNA) is a useful tool in the characterization of breast masses in adolescents, but it does not have the capacity to differentiate phylloid tumors from fibroadenoma.⁸ Core-biopsy is more accurate. However, due to the psychological and emotional effects of thick needle biopsy

in young patients, it is not uncommon to continue with excisional biopsy as a diagnostic and therapeutic method.⁹ In this case, the patient performed Core-biopsy guided by breast ultrasonography confirming fibroadenoma in the histopathology with a proposal of surgical excision of the tumor.

The management of juvenile fibroadenoma varies from tumor excision to expectant management. In cases of simple fibroadenoma, the treatment is bi-annual follow-up by ultrasonography. Surgical resection is indicated for fibroadenomas more than 5 cm in diameter, rapid growth, which cause severe pain, distort the architecture of the breast and skin, multiple tumors and bilateral breast masses, persistent mass without regression, stromal hypercellularity, cystic changes in the ultrasonography, suspicion of malignancy or fibroadenoma histologically.⁷ Recurrence is more likely to occur in masses larger than 2cm, with a 15% global recurrence in 22 months and for masses with stromal mitotic index > 2/hpf. Recurrence may not be associated. The surgical margin, patient's age or mass position.^{10,11}

Conclusion

It is important to emphasize that the giant fibroadenoma is attributed a rapid and exaggerated growth in the breast, which generates asymmetries and aesthetic deformities in adolescents, being important to provide psychological support to these patients. As seen, fibroadenomas are a challenge since the treatment can range from surgical removal to expectant management in the absence of specific guidelines to guide such medical decision, being the knowledge of the clinical history, associated with the characteristics identified by the imaging methods and the histological correlation with the necessary tools so that the proper orientation of the management of these cases.

Acknowledgment

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Conflicts of interest

Author declares that there is no conflict of interest.

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