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Case Report

Giant juvenile fibroadenoma of the breast: a case report

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ABSTRACT

Giant juvenile fibroadenoma is a rare benign breast entity. The clinical presentation can be dramatic mimicking malignancy. Meticulous surgical management is mandatory to ensure a fine balance between adequate tumor resection and the best cosmetic outcome for the mammary gland. We report a case of a 13-year-old girl who presented to our department with a 20×18 cm mass on her left breast. Imaging and histopathological investigations were suggestive of juvenile fibroadenoma. Conservative surgery was performed with good cosmetic results. Giant fibroadenoma must be considered in any adolescent female with a rapidly growing breast mass. Simple surgical excision is recommended to allow normal breast tissue to grow.

Keywords: Giant fibroadenoma, Adolescent, Breast, Biopsy, Conservative surgery

INTRODUCTION

Fibroadenomas are the most common tumors among women less than 30 years. It can be present in various sizes. When they present a large size, named Giant fibroadenoma, it may result in breast asymmetry and deformity. The exact etiology of this giant form is still unknown and hormonal theory has been mentioned.¹ Multiple surgical techniques have been described to optimize aesthetics and minimize psychological repercussions in this specific population. We reported a case of giant juvenile fibroadenoma successfully managed in our department with good esthetic results.

CASE REPORT

A 13-year-old girl, without a familial history of breast malignancy, was presented in our department for a left breast lump noticed 3 months before with rapid expansion over 3 weeks. Breast examination objectified a painful large mass occupying the totality of the left breast with distended superficial veins (Figure 1). No nipple abnormalities or left axillary lymph nodes were found. The right breast and axillary region were normal. Breast ultrasonography showed a solid, hypoechoic lesion in the

left breast, measuring approximately 21×17 cm with no axillary lymph nodes.



Figure 1: Large mass occupying the totality of the left breast with distended superficial veins.

A preoperative diagnosis of phyllode tumor or fibroadenoma or hamartoma without excluding malignancy was made. Under local anesthesia, a breast biopsy was performed confirming the diagnosis of juvenile fibroadenoma. Under general anesthesia, a submammary incision was made with complete excision of the mass and meticulous homeostasis (Figure 2). A large breast cavity was observed and a vacuum-assisted closure drain was

placed in situ. The final histopathological report was a giant juvenile fibroadenoma of the left breast. The patient had a successful postoperative recovery and was discharged home on the second postoperative day. She is now at 6 months follow-up with normal appearance of the left breast (Figure 3).

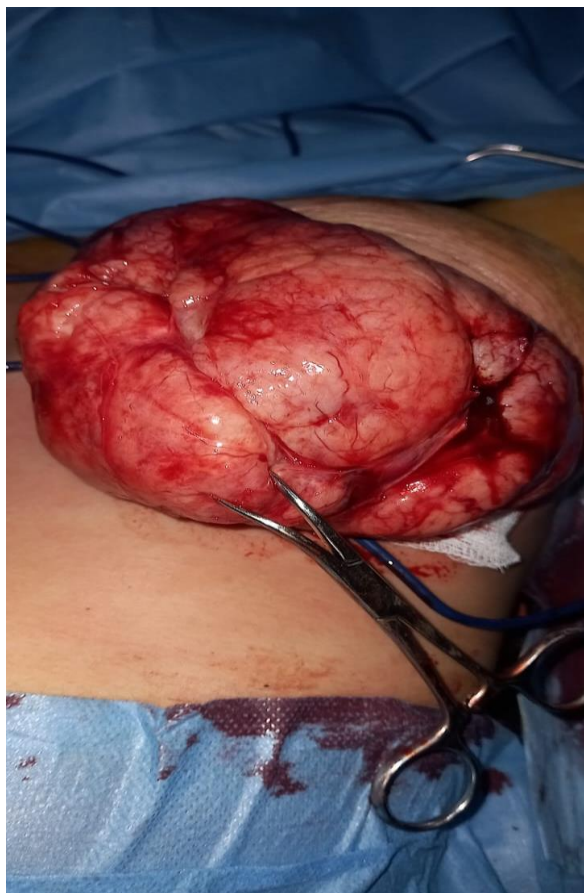


Figure 2: Operative view of the excised mass.



Figure 3: Normal appearance of the left breast at 6 months' follow-up.

DISCUSSION

Breast fibroadenoma is a benign stromal and epithelial pattern on histological examination which is subdivided into adult and juvenile type. The juvenile type is limited to the age group between 10 and 18 years. A giant

fibroadenoma is a specific entity of fibroadenoma that weighs >500 g or measures >5 cm on diameter with an estimated incidence between 1 and 8% of all breast lesions in the adolescent population.² Giant juvenile fibroadenoma greater than 20 cm is extremely rare and only a few cases have been reported to date. Islam et al described the largest juvenile fibroadenoma of the breast in a 16 year-old-girl, measuring 28×25 cm.¹ Most giant fibroadenomas are unilateral, however, bilateral forms have been described.^{3,4} The main differential diagnoses for this rare entity are phyllodes tumors, lipomas, hamartoma, and breast cancer. Traditional radiologic investigations (ultrasound, mammography and magnetic resonance imaging) have not been shown to be able to differentiate adenofibroma from other breast tumors.⁵ Core biopsy with histopathological examination is mandatory before any surgical procedure as the surgical approach and implications for prognosis are vastly different between phyllode tumors, cancers and fibroadenomas. Fine needle aspiration has not been shown to be adequate for pre operative diagnosis.^{6,7} Surgical management of this rare entity is challenging as its massive dimension can make for a difficult cosmetic outcome with a strong psychological impact on these adolescent patients. There is no uniform surgical technique for these tumors and approach options are multiples. The incision is varied from periareolar, round block, submammary, axillary and directly over the lump.^{1,8} Submammary incision has been described as a good choice of incision for both the ptotic and non-ptotic breasts.⁹ However, it is the gold standard option for ptotic breasts as any degree of ptosis will hide this scar, as was in our case. Patients must be taken into consideration that there is often some gain in skin elasticity by about a few months after surgery in addition they are often still undergoing puberty.¹⁰

CONCLUSION

Giant juvenile fibroadenoma is a rare breast entity that should be differentiated preoperatively from others breast lesions to avoid unnecessary radical management in these young females. Surgeons must carefully plan the position of their incision to allow complete removal of the tumor with good cosmetic results. Submammary incision is the gold standard approach, especially in ptotic breasts.

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