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Giant Fibroadenoma of the Breast: A Case Report

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Abstract

Introduction: Giant fibroadenomas are an uncommon breast tumor accounting for 0.5% to 2% of all cases of fibroadenomas. Diagnosis is difficult due to the rarity of giant fibroadenomas and the resemblance of its clinical and imaging features with other breast neoplasms, especially phyllodes tumor.
Case Presentation: The authors report a rare case of giant fibroadenoma in a 14-year-old South Sudanese female, which was suspected clinically, ultrasonography, and by fine needle aspiration cytology and confirmed by histopathology after total mass excision.
Conclusions: Fibroadenomas presenting a very large diameter could be mistaken with malignancy and other benign breast lesions. Fine needle aspiration biopsy and core needle biopsy appears fundamental to evaluate their benign nature. Conservative surgery using sub-mammary incision is the gold standard of treatment with good cosmesis.

Keywords: Breast Mass, Giant Fibroadenoma, Conservative Surgery

1. Introduction

Fibroadenomas are the most common benign tumors of the breast under the age of 30. Occasionally, they could show massive growth resulting in what is called Giant Fibroadenomas (GFs). These tumors could rapidly double in size, reaching a large diameter, stretching the skin and distorting the nipple mimicking other breast lesions. The authors present a case of giant fibroadenoma in a South Sudanese adolescent female, which was treated conservatively with good cosmesis despite a delay in diagnosis.

2. Case Presentation

A 14-year-old South Sudanese female was referred to the Moroccan Military field hospital (Juba), accompanied by her mother with the chief complaint of a rapidly enlarging painless mass in her left breast that had appeared 5 months before admission. There was no fever, anorexia, weight loss, history of breast trauma, family history of tuberculosis or breast neoplasm. Clinical examination revealed a large painless, firm, and mobile mass, measuring 14 cm × 10 cm, in the left breast, without nipple discharge, inflammatory signs, axillary or supraclavicular lymphadenopathy (Figure 1A). The right breast and nipple were normal and systemic examination did not show any abnormality. Ultrasonography (USG) detected a well circumscribed hypoechoiclesion in the left breast, measuring approximately 12 cm × 7 cm, with increased internal vascularityin color Doppler; the lesion was sufficiently large and could not be included in a single transducer width (Figure 2A). No abnormality was seen in the right breast. Routine hematological and biochemical examinations were within normal limits. A differential diagnosis of giant fibroadenoma, phyllodes tumor or breast tuberculosis was made, without excluding cancer. Fine needle aspiration cytology (FNAC) of the breast lump was suggestive of fibroadenoma. Under general anesthesia, total enucleation of the breast mass by a sub-mammary incision was performed with preservation of normal breast tissue, skin, and nipple-areola complex (Figures 1B and 2B). The final pathologic report was giant fibroadenoma of the breast. The patient had an uneventful postoperative course, and she was discharged home 48 hours later.

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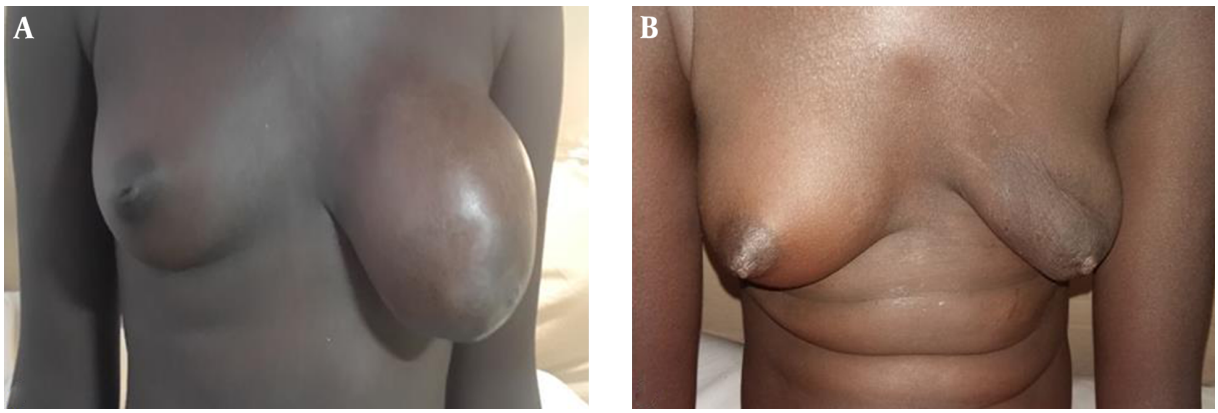


Figure 1. Pre (A) and Post-Operative (B, 3 Weeks After Surgery) Images of the Left Breast

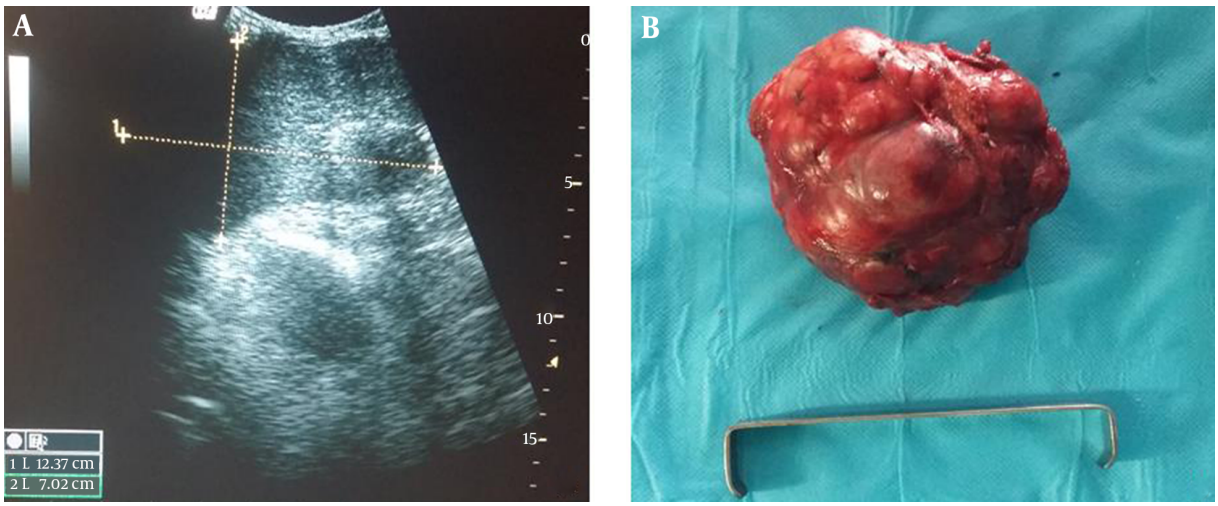


Figure 2. (A) Well Defined Hypoechoic Lesion in the Left Breast, Slightly Lobulated, Measuring Approximately 12 cm × 7 cm. (B) Macroscopic View of the Resected Specimen (910 Grams)

3. Discussion

Giant fibroadenomas are a rare form of fibroadenomas defined as being larger than 5 cm or weighing more than 500 grams or disproportionally large compared to the rest of the breast (1, 2). The case fits well into the criteria of GF, it being 12 cm × 7cm on USG and weighing 910 grams. This type of tumor accounts for 5% of all breast tumors and 0.5 to 2% of all cases of fibroadenomas (3, 4). The peak age has been reported between 17 and 20 years, with less than 5% younger than 18 years of age (5). The youngest patient was 13 months (6). There is no consensus regarding the exact etiology of GF; however, excessive estrogen stimulation and/or receptor sensitivity or reduced levels of estrogenantagonist during puberty have been implicated in pathogenesis (2, 7). There are many lesions of breast, which enter in the differential diagnosis with GF. In the current case, it was confused with phyllodes tumor, breast tuberculosis, and cancer. In fact, the clinical and sonographic appearance of giant fibroadenoma is indistinguishable from these lesions. Fine needle aspiration biopsy and core needle biopsy has been found to be efficacious for diagnostic modalities for evaluation of breast lump in this age group (2). Surgical enucleation remains the mainstay of treatment of giant fibroadenomas in order to allow previously compressed normal surrounding breast tissue and retain normal function and appearance (4). A submammary incision is preferred to provide excellent cosmesis with minimal risk of recurrence (1, 2), as in the current case. Mastectomy is not necessary and no adjuvant treatment is indi-

cated. In a few cases, reconstructive techniques and plastic surgical expertise are required (4, 8).

Footnote

Conflict of Interests: The authors declare no conflict of interest.

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