

Giant fibroadenoma of the breast in late third trimester

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ABSTRACT

Giant fibroadenomas (GFs) occurring during pregnancy are extremely rare, and only a few cases have been reported. Although it is a benign condition, it often requires biopsy or even surgery to exclude malignancy. The authors report a new case of GF in a 29-year-old pregnant woman with a family history of breast cancer. She presented at 37 weeks of gestation with a large mass in her left breast. Tru-cut biopsy was suggestive of fibroadenoma. After delivery, enucleation of the mass was performed, and histology confirmed the previous diagnosis. Benign neoplasms should be suspected in any pregnant woman with a rapidly enlarging breast mass. Early surgical excision should be offered as a standard treatment to avoid structural damage to the breast and the need for reconstructive surgery.

Key words: Breast mass; giant fibroadenoma; pregnancy; Tru-cut biopsy.

Introduction

Breast masses are common during pregnancy due to ducto-alveolar proliferation related to hormonal changes. Most of these lesions are benign and correspond to fibroadenomas which do not differ from equivalents in nonpregnant women. Exceptionally, fibroadenomas can attain a size more than 5 cm or are disproportionately larger than normal breasts resulting in what is termed giant fibroadenomas (GFs). We present a case of GF in a pregnant woman with a brief review of the literature.

Case Report

A 29-year-old south Sudanese woman, gravida 4, para 3, presented in Moroccan Military field Hospital of Juba. She was 37 weeks of pregnancy and had a rapidly enlarging mass in her left breast discovered, 2 months earlier. There was a family history of breast cancer. Careful breast examination objectified a non-painful solid mass on the left side, measuring 24 cm × 15 cm which was not attached to the

superficial or the deep tissues. The skin was normal but for dilated subcutaneous venous plexus [Figure 1]. The axillary nodes were not enlarged and the right breast was normal. Obstetrical ultrasound scan showed a single live intrauterine fetus with the estimated fetal weight of 3300 g and adequate liquor volume. The placenta was fundal, grade III maturity. Ultrasonographic size of the left breast mass was approximately 17 cm × 11 cm. It was homogeneous, hypoechoic, and well circumscribed, but too large be included in a single transducer width [Figure 2]. Her blood investigations were normal except for anemia (Hb: 10 g/dl). A differential diagnosis of breast cancer, GF, or phyllodes tumor was made. Histological examination of a Tru-cut biopsy of the breast lump was consistent with a fibroadenoma. Given the gestational age at diagnosis, clinical follow-up was indicated. She had an uncomplicated spontaneous labor and delivery of a healthy baby. She consented to total

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Figure 1: Preoperative breasts image, note the asymmetry and the giant mass in the left side

mass excision (20 days after labor), which was done under general anesthesia through a 12 cm periareolar incision. The nipple-areola complex was preserved. There was no marked deformity in the breast and no drain was needed. The final histology report was that of a GF of the breast with lactational changes. There was no evidence malignancy. The patient had an uneventful postoperative course, and breastfeeding was continued 24 h after surgery.

Discussion

GFs are a rare form of fibroadenoma representing approximately 5% of all breast tumors and 0.5%–2% of all cases of fibroadenomas.^[1,2] They most commonly affect women of African or Asian origin.^[3] The pathogenesis of GFs is still not completely understood.^[4] During pregnancy, fibroadenomas increase in size and may show locational histologic changes. The high concentrations of estrogen, progesterone, and prolactin promote the growth of ducts and the formation of tubule-alveolar structures. This might be a reason for the significant enlargement in this period.^[5] Although fibroadenomas are most common during pregnancy, GFs are exceptional and only three cases < 15 cm have been reported in the literature.^[3,5,6] Diagnosis of this large benign entity during pregnancy is difficult not only due to its rarity but also owing to the resemblance of its clinical and imaging features with other breast neoplasms, especially phyllodes tumor as was in the present case. These tumors should be considered in all fast developing breast masses due to the fact that there are rare malignant types which may metastasize and treatment modalities differ significantly from those of GFs. While the phyllodes tumor must be removed with safety margins, GFs are well encapsulated and must be enucleated. Neither ultrasound nor mammography or magnetic resonance imaging, as well as fine-needle aspiration, has been shown to be helpful in definitely differentiating fibroadenoma from phyllodes tumor.^[7,8] Collins *et al.* recommended antepartum biopsy for women presenting with breast masses in the first, second, or early third trimesters, and postpartum excision for masses presenting in late third trimester.^[9] In our patient, who had a family history of breast cancer, the third most



Figure 2: Ultrasound of the left breast demonstrated a well-defined hypoechoic homogeneous mass, measuring approximately 17 cm × 11 cm

common malignancy during pregnancy,^[10] Tru-cut biopsy was performed to exclude malignancy. Surgical enucleation is the gold standard treatment for GFs with minimal risk of local recurrence. It allows the previously compressed normal surrounding breast tissue to expand and retain its normal function and appearance. Some authors recommend extirpation of these tumors during pregnancy to exclude malignancy, as there are reports of ductal carcinoma *in situ* in a fibroadenoma,^[11] while others tend to prefer the excision after delivery, as fibroadenomas are benign neoplasms.^[3]

Conclusion

As with other neoplasms discovered during pregnancy, GFs need an accurate evaluation to exclude malignancy. Preoperative workup must include imaging and histopathological examinations. If possible surgical enucleation should be delayed until postpartum to avoid risks of general anesthesia on fetomaternal outcome.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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