

Unusual Presentation of a Rare Giant Fibroadenoma of the Breast

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Abstract

Giant fibroadenomas are exceptional in pregnancy and in most of cases, diameter doesn't reach more than 15 cm. However, our case is a rare one that reached 18 cm in a 23-year-old female referred post-partum for evaluation of a huge left breast mass. On the other hand, there is a persistent debate regarding the best modality of the surgical approach to giant tumors; most of the experts recommend the enucleation of the tumor after delivery while others argue that extirpation during pregnancy is the best since we have to exclude malignancy. In our patient, the whole tumor was excised at the postpartum period and the pathology did not show any sign of malignancy. Even if our case does not clearly reveal the long term result of the postpartum excision of a giant fibroadenoma, the short term result we have had after this approach was satisfying. Further studies are important to be published in order to confirm pros and cons of the postpartum approach.

Keywords

Fibroadenomas, Breast Disease, Pregnancy, Surgery, Postpartum

1. Introduction

Fibroadenomas are benign solid breast tumors of unknown etiology that contain both glandular and fibrous tissue. They are usually small and consequently can be treated conservatively. However, up to 2% of fibroadenomas will show a rapid growth reaching the stage of giant fibroadenoma with an important breast deformity where malignancy is highly suspected and cannot be excluded. Giant fi-

*Same contribution.

broadenomas refer to fibroadenomas that are over 10 cm in size, that are usually managed surgically. These tumors are very rare and in most of cases, their diameter doesn't reach more than 15 cm [1]. Fibroadenomas undergo lactational histologic changes during pregnancy along with increase in size [2]. We hereby present the case of a fibroadenoma of the breast that reached 18 cm.

2. Case Presentation

This is a 23-year-old lady who was referred post-partum by her gynecologist to the general surgery department for evaluation of a huge left breast mass that started at first with a 1 cm lesion at the fifth month of pregnancy and continued to grow till a diameter of 18 cm three months postpartum (Figure 1).

Note that during the pregnancy, her obstetrician decided not to perform any invasive procedures over the tumor but advised her to seek a general surgeon's opinion immediately after delivery. However, she was lost of view until three months postpartum.

The patient underwent a normal vaginal delivery and had a healthy baby; note that she has neither a past medical nor a past surgical history. The mass was non-painful and mobile with no history of breast secretions. Due to its large size, the patient started suffering from dyspnea and back pain. Ultrasound did not show any signs of malignancy. A partial mastectomy was performed and the tumor was completely excised. The healthy tissue was preserved along with the nipple-areola complex. Intraoperative frozen section showed a lactating adenoma and the excised tumor weighted 1590 grams. The definitive pathology results showed a proliferation of multiple dilated and cystic galactophoric ducts lined by flat or hyperplastic epithelium, separated by fibrotic and myxoid stroma surrounded by an inflammatory infiltrate with secretions in the lamina. These pathological findings indicated a diagnosis of fibroadenoma (Figure 2).

Seen at three months post operatively, the patient did not have any recurrence and the esthetical results were satisfying (Figure 3).



Figure 1. Preoperative breast image, note the asymmetry and the huge left breast mass.

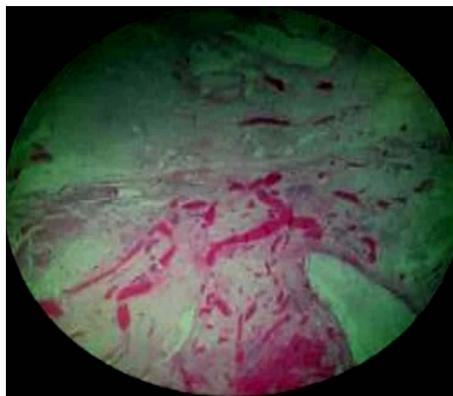


Figure 2. The definitive pathology result.



Figure 3. Postoperative breast image, with acceptable symmetry and complete excision of the tumor.

3. Discussion

Giant fibroadenomas are benign breast tumors that constitute approximately 5% of all breast tumors and 0.5% - 2% of all cases of fibroadenomas [3]. They are unilateral in 90% of cases, and usually occur in the upper outer quadrant and vary in size from less than 1 cm to 20 cm [4]. Unlike simple fibroadenomas, giant fibroadenomas are exceptional during pregnancy and only three cases >15 cm have been reported in the literature. In our case, the size of the mass reached 18 cm.

Giant fibroadenomas are mainly seen in the 2nd and 3rd decade of life in Asian and African patients [5]. The differential diagnosis of fibroadenoma is very wide but phyllodes tumors are the most important ones and it seems that fine needle aspiration and ultrasound are not effective in differentiating them. In fact, the surgical excision is the best means for diagnosing this lesion. It is crucial to differentiate these lesions because there is more risk for malignancy in phyllodes and therefore, the management will be different [1]. Our patient belonged to the typical age group but unlike the literature she belonged to the Caucasian race.

There is still a debate regarding the best modality for surgical management of giant tumors during pregnancy. Most of the experts recommend the enucleation of the tumor after delivery while others argue that extirpation during pregnancy

is the best modality to exclude malignancy [6]. In the case of our patient, we excised the whole tumor postpartum and the pathology did not show any sign of malignancy. The diagnosis of giant breast tumors during pregnancy is wide, and malignancy should always be ruled out. Ultrasound, FNA and MRI can be considered as useful modalities to rule out malignancy [7]. Some authors consider that the enucleation of the tumor after delivery, as it was done in our case, is the best surgical approach to avoid the effects of general anesthesia of both the mother and the baby [6]. However, other authors consider that because of the progressive structural damage of the breast an immediate surgical enucleation is indicated in this case. In fact, Heilman *et al.* reported a case of a 17-year-old lady, 24 weeks gestation, diagnosed with a 10 cm fibroadenoma in the right breast where a lumpectomy was immediately performed with no complication upon the ongoing pregnancy and where the safety of the fetus was provided by peri-operative monitoring [7].

4. Conclusion

Even if this single case, as it is presented, doesn't show the long term result of different timings of surgical approaches. The result of the operation done after delivery was satisfying. Further studies are important to be published in order to confirm pros and cons of the postpartum approach in comparison with the one done during pregnancy.

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Consent

Written consent has been taken from the patient for publication of this report.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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