

Bilateral giant fibroadenoma in a nulliparous lady: challenges in management

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Introduction

Fibroadenomas are the most common type of breast lump found in young women. Giant fibroadenoma (GF) refers to fibroadenomas, that are either >5cm in size or >500 gram in weight [1]. There are a few important issues that have to be considered during the surgical management of these breast lumps. Through this report of bilateral giant fibroadenoma in a young nulliparous lady, we try to emphasize these management issues.

Presentation

A 23-year-old, married, nulliparous woman presented to us with chief complaints of gradually progressive, painless, bilateral breast lump for 8 years. There were no symptoms or signs suggestive of malignancy. On examination right breast had two lumps measuring 10x6 cm and 5x4 cm at 9 O'clock and 3 O'clock position respectively. Left breast had a benign-appearing lump of 6x5 cm size at 4 O'clock position. All lumps were firm, mobile and had smooth margins. On imaging with ultrasound, all lumps had lobulated margins, were hypochoic and reported as BIRADS III. We did a core needle biopsy from all three lumps for pathologic assessment and they were reported as fibroadenomas.

After confirming the diagnosis of benign lump, we planned for excision. Left breast lump was relatively easily excised through a periareolar incision. Excision of right breast lumps was done through a periareolar incision (Figure 1), after careful planning during which consideration was given to various approaches described for such large masses including submammary, axillary, directly over the lump, round block and inverted “T” incision. The final histology revealed the lesion to be fibroadenoma and the patient had a good cosmetic outcome with little deformity at 6 months of follow-up (Figure 2).



Figure 1. Giant fibroadenomas excised through a periareolar incision from right breast



Figure 2. Excellent cosmetic result after 6 months following surgery

Discussion

Most fibroadenomas larger than 3 cm in size require excision, although there are no uniformly accepted guidelines or cut off size recommended for these benign tumours. Similarly, there are no universally accepted guidelines for the surgical approach and incision. Giant fibroadenomas present some unique challenges in management like obtaining an accurate preoperative diagnosis of benignity, choice of anaesthesia (local versus general), preservation of milk ducts to allow breastfeeding in future and providing a cosmetically acceptable result.

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Preoperative evaluation

A diagnosis of benignity is usually easy to obtain with the help of imaging (ultrasound or mammogram depending on the breast density) and fine needle aspiration cytology (FNAC), but the most important differential diagnosis that one should try and rule out is phyllodes tumour. Hence, the pathological evaluation in cases of giant fibroadenoma should preferably be done by a core needle biopsy, because FNAC is associated with more chances of false negative and indeed, even core biopsy can be misleading in some cases. The reported sensitivity of core biopsy in distinguishing fibroadenomas from phyllodes is about 70% [2]. This is of major concern to the patient and surgeon since missing a diagnosis of phyllodes, usually means a re-operation.

Choice of anaesthesia

Most of the fibroadenomas can be excised under local infiltration anaesthesia but giant fibroadenomas usually will require a large dose of local anaesthetic and hence general anaesthesia is required. Another issue that should be considered before a decision regarding the anaesthetic is made, is the surgical approach. If one plans an incision that is much smaller than the size of the lump, surgery under local anaesthesia is a bad option. In such situations, the patient will have discomfort/pain due to stretching and manipulation of the incision.

Preservation of milk ducts

This issue is of paramount importance in patients who are desirous of pregnancy and lactation in future, and is also an issue which is often overlooked. Fibroadenomas arise from the terminal duct lobular units and if peripherally located, excision using a proper technique rarely interrupts any major duct. After incising the areolar margin, tunnelling/ creation of skin flaps is done in the subcutaneous plane and breast parenchyma should not be incised to avoid any injury to the milk ducts. In case of centrally located tumours, a careful sharp dissection of the tumour away from the ducts usually allows the milk ducts to be preserved. Any attempt at blunt dissection may avulse the major ducts and hence should be avoided in centrally located tumours.

Cosmesis

For excision of giant fibroadenomas, various approaches are possible and have been described. The periareolar incision provides the most acceptable cosmetic result [3] and we believe that all benign lumps can be excised through this approach. In our case, we used a periareolar incision in the upper half of the areolar margin on the right side and dissected the tumour all around. After dissecting the tumour from its attachments to the surrounding breast we delivered it by

retracting the incision. During the tumour delivery, we made multiple incisions on the tumour to deliver it out of the wound. This "Saw Tooth" technique of tumour delivery was recently published by Naraynsingh et al although it has been in use for years [4]. This technique allows the delivery of even massive tumours through a small incision. In addition it minimizes the likelihood of other complications like keloid/ hypertrophic scarring and decreased skin sensitivity by minimizing the length of the skin incision. The complications associated with periareolar incisions are paraesthesia of the nipple and nipple collapse. Nipple collapse can occur after removal of central breast lumps using any incision, but nipple paraesthesias are more often transient [5].

For tumours located in the vicinity of areolar margin, round block technique allows wider access and acceptable cosmesis but has the risk of nipple necrosis. Nipple necrosis can also occur with large periareolar incisions but it can be reliably avoided if no more than half of the circumference of the areola is incised.

An axillary skin crease incision is utilized for tumours in the upper outer quadrant and provides excellent cosmesis because of the absence of any scar on the breast. Similarly, a submammary approach also provides an invisible scar. Another advantage of a submammary incision is that almost whole of the breast can be lifted off the chest wall and any tumour can be excised, although it has a disadvantage of requiring a relatively larger incision for exposure of the tumour. The pedicle mammoplasty approach as described by Ribeiro can also be used but is more commonly reserved for multiple small fibroadenomas as it is more time consuming and tedious.

All authors disclose no conflict of interest. The study was conducted in accordance with the ethical standards of the relevant institutional or national ethics committee and the Helsinki Declaration of 1975, as revised in 2000.

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