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CASE REPORT

A CASE OF JUVENILE GIANT FIBROADENOMA

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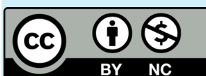

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ABSTRACT

Fibroadenomas that measure more than 5 cm in diameter or 500g in weight are known as Giant Fibroadenoma(GF). The most frequent cause of unilateral breast enlargement in teenagers and a rare variant of fibroadenoma, juvenile giant fibroadenoma (JGF), accounts for 2% to 10% of all breast fibroadenomas. GF requires a full surgical excision due to its rapid growth and diagnostic challenges. We present a case of Juvenile Giant fibroadenoma in 15 years female. The lesion was excised using Modified round block technique by Benelli. The post-operative outcome was satisfactory. The round block technique by Benelli is one of the modality for excision of giant fibroadenoma. This technique has better cosmetic and functional outcome as it produces a discrete scar and a more regular breast contour.

INTRODUCTION

One of the common benign lesions in breast among women of young age is fibroadenoma. They usually present as single breast mass. Rather than true neoplasms, fibroadenomas are assumed to be aberrations of normal breast development or the product of hyperplastic processes.[1] Fibroadenoma that is larger than 5 cm or weighs 500g is termed as 'Giant Fibroadenoma'.[2] Presentation of fibroadenoma can be in various sizes. Presentation as large swellings, with a history of sudden expansion is particularly worrisome. The exact etiology of giant fibroadenoma is unknown, however hormonal influence can be one of them.[3]

CASE REPORT

Our case is a 13 years old female who herself noticed mass in her left breast 3 months earlier. It was initially of a pea size that gradually increased to its size at presentataion of occupying almost whole of the breast over 3 months. At first it was painless but has been painful for last few weeks before presentation. There was no history of trauma, fever, skin changes, breast discharges, axillary lump or swelling, chest pain, difficulty in breathing. She had no known family history of breast or ovarian cancers. Menarche was at 13 years and regular. The patient denied any sexual activity. There was no history of using oral contraceptives or chest wall radiation. On examination of left side of her breast she had visibly enlarged left breast with no skin changes no venous prominence, no nipple changes or discharge. On palpation, firm, tender, mobile, non transilluminant mass, with no fixation to underlying tissue or skin was present in left breast; almost occupying whole of her left breast. No lymph nodes were palpable in bilateral axilla. Her right breast showed no significant findings.

Investigations were done. Ultrasound scan of bilateral breast and axilla was done that showed large heterogenous mass lesion of size around 10x8x7 cm involving almost all quadrants of left breast predominantly in upper quadrants with increased vascularity. A trucut biopsy of left breast was done that showed features suggestive of fibroadenoma with no features of atypia or malignancy.

Complete excision of the lump was planned. Written consent was obtained from the parents for the procedure as well as to obtain intraoperative and postoperative photographs.

Modified Round-block technique by Benelli was followed.

Under general anaesthesia, two concentric incisions were given, the inner one being at the edge of the areola and the outer one at a distance of 3cm from inner incision (to cover the whole of the excision) (Fig 1). To keep the underlying dermis intact, the area between the inner and outer circles was de-epidermized (Fig 2). Well capsulated mass of size approx 10x8x7 cm was found intraoperatively (Fig 3). Post operatively patient had good cosmetic outcome. She had normal sensation on her left nipple and areolar region.

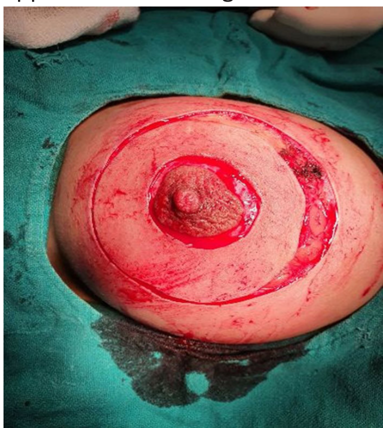

Figure 1: Two concentric incision given

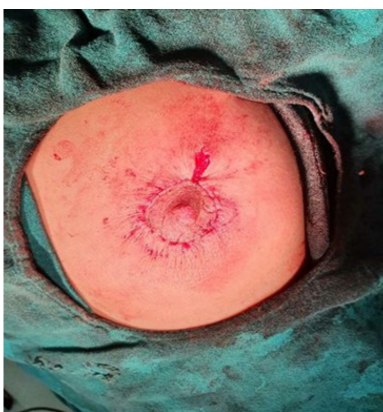

Figure 2: Suturing after careful removal of mass intra-operatively

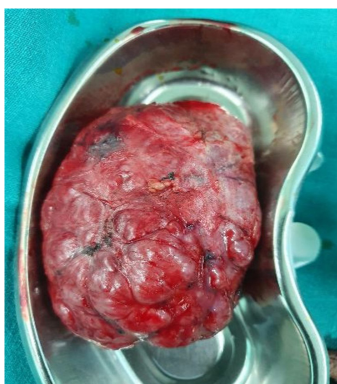

Figure 3: Mass of size approx. 10cm X 12cm

DISCUSSION

While benign fibroadenomas are frequently found in breast tissue, large fibroadenomas are extremely uncommon. A breast fibroadenoma that is greater than 5 cm in any dimension, more than 500 g in weight, expanding quickly, or disproportionally huge compared to the rest of the breast is referred to as GF.[4] Giant fibroadenomas are typically found in women who are pregnant or nursing. Increases in prolactin, progesterone, and estrogen are related to their growth. They are further divided into adult and juvenile-type.[2] Juvenile giant fibroadenoma is used to describe those that are discovered in adolescent women (15–25 years of age)[5]. The typical presentation of fibroadenomas includes firm, moveable, painless, easily palpable breast nodules. Giant fibroadenomas, however, can manifest as unilateral macromastia that lacks definite borders or texture variations.[6] In our case she was a 13 years old with breast lump and asymmetry for 3 months.

It is believed to be a deviation from typical development. Although it is a benign disorder, the stromal components within it can cause neoplasia to develop. The risk is estimated to be 3%, and it increases if the fibroadenoma is accompanied by calcifications, cysts, papillary apocrine alterations, or sclerosing adenosis. The primary differentials for this illness include lipomas, physiological hyperplasia, cysto-phyllodes tumors, and other uncommon differentials include hamartomas, pseudoangiomatous stromal hyperplasia, adenocarcinomas, and macrocysts.[3]

It is crucial to distinguish giant juvenile fibroadenoma from other diseases with a similar presentation, such as benign phyllodes tumor (BPT), which typically affects women between the ages of 35 and 55 and is characterized by increased cellularity, higher tendency for recurrence, and metastasis. BPT can be identified histologically by the presence of stromal cell atypia and leaf-like features.[7]

Treatment options range from uncomplicated enucleation through mastectomy with or without immediate or delayed breast reconstruction, making them heterogeneous and diverse. The type of incision varies as well, including circumareolar, submammary, and incisions made directly over the tumor. In our case “Modified Round-block technique by Benelli” was followed. The round block technique is superior to selective wide local excision because it results in fewer re-excisions and better cosmetic outcomes for patients. It also leaves no scars and causes neither nipple nor areola movement.[8]

The postoperative expectations must be adequately explained to patients. Patience is crucial before beginning unneeded reconstructive operations because there is frequently some improvement in skin elasticity by about 6 months postoperative. Additionally, since these patients are frequently still going through puberty, this must be taken into account as well. Due to reports of this tumor recurring, many patients require long-term follow-up.[9]

CONCLUSION

The most important cause of unilateral breast enlargement in young female is Juvenile Giant Fibrodenoma. There are many modalities for excision of JGF. Among many modalities modified round block technique by Benelli has better cosmetic and functional outcome.

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