Giant Fibroadenoma of the Breast in an Adolescent

Bir Adolesanda Memenin Dev Fibroadenomu

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ABSTRACT

A 15-years-old girl was admitted to our Paediatric Surgery Department with a history of rapidly increasing enlargement of the right breast over the previous five months. Sonography revealed a non-infiltrative large tumour located in the right breast. The mass was excised and the histopathological examination established a diagnosis of giant fibroadenoma of the breast. The postoperative period was uneventful, and cosmetic intervention was accepted by the patient. Giant fibroadenoma is a rare pathology, usually presenting in adolescence, characterised by massive and rapid enlargement of an encapsulated mass. Currently, there are some preoperative difficulties in distinguishing it from cystosarcoma phyllodes, which has benign and malignant forms. It is important to differentiate the two pathologies before surgery as they have a different therapeutic approach and different follow-up. In cases of fibroadenoma, breast tumours over 5 cm in diameter and showing rapid enlargement should be excised and a histopathological diagnosis must be made. *(Gazi Med J 2012; 23: 94-6)*

Key Words: Giant fibroadenoma, adolescent, breast

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ÖZET

On beş yaşındaki kız hasta 5 aydır olan ve sağ memesinde hızla büyüyen şişlik nedeniyle Pediatrik Cerrahi departmanına başvurdu. Ultrasonografi sağ memede çevreye yayılmayan dev tümörü gösterdi. Kitle çıkarıldı ve histopatolojik tanı dev fibroadenom olarak teyid edildi. Ameliyat sonrası sorun yaşanmazken hasta kozmetik açıdan memnundu. Dev fibroadenom nadir görülürken sıklıkla adolesanlarda tanı alır, kapsüle, büyük ve hızlı büyüme ile karakterizedir. Günümüzde ameliyat öncesi dönemde iyi ve kötü huylu Cystosarcoma phyllodes tümörlerinden ayrılması zordur. Bu iki patolojiyi birbirinden ayırt etmek tedavi yaklaşımları ve farklı izlem açısından önemlidir. Fibrodenomların tersine 5 cm' den büyük ve hızlı büyüme gösteren meme kitlelerinde, kitlenin çıkarılarak histopatolojik tanının konması tercih edilmelidir. *(Gazi Med J 2012; 23: 94-6)*

Anahtar Sözcükler: Dev fibroadenom, adolesan, meme

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INTRODUCTION

Fibroadenomas comprise approximately 75% of breast tumours in young women and are histologically similar to the adult type found in older women. When they attain a size of 5 cm in diameter and/or a weight of 500 g, they are classified as giant fibroadenomas. The diagnosis and management of giant fibroadenomas in the adolescent breast can be a difficult problem (1, 2). The incidence is reported as 0.5% to 2% of all fibroadenomas. Giant fibroadenomas are the most common cause of massive breast enlargement in adolescent and young women (3). These lesions can grow very large, with reports of some tumours being 17 cm in diameter or greater. The largest giant fibroadenoma in adolescence reported recently was 15 cm in diameter (3, 4). This is the third documented case of a large giant fibroadenoma in the literature.

CASE REPORT

A 15-years-old girl presented for evaluation of unilateral breast enlargement over a five-month period. The patient noticed a rapidly enlarging mass during this period. Physical examination revealed a markedly enlarged right breast containing a 10 cm palpable mobile mass. Two weeks later, when the patient returned with the ultrasonography report, the mass had increased to 13 cm in diameter. The mass was painless, mobile and located in the retroareolar region to the lateral side of the breast. There was no history of trauma, nipple discharge, fever, anorexia or menstrual abnormality. There was no asymmetry between the breasts because of the large size of the breasts. The axillary lymph nodes were not enlarged. Ultrasound revealed a well-circumscribed, heterogeneous-hypoechoic solid retroareolar mass showing minimal vascularisation by coloured Doppler imaging. Because of the size, the rapid enlargement of the tumour and the anxiety of the parents, an early surgery appointment was made. An operation was performed with an elliptical areolar incision and the lesion was removed en bloc. Upon subsequent evaluation, the tumour was a fibrous mass, 13x8.5x5 cm in size and encapsulated on one side (Figure 1). Microscopic examination showed the typical features of giant fibroadenoma (Figure 2).

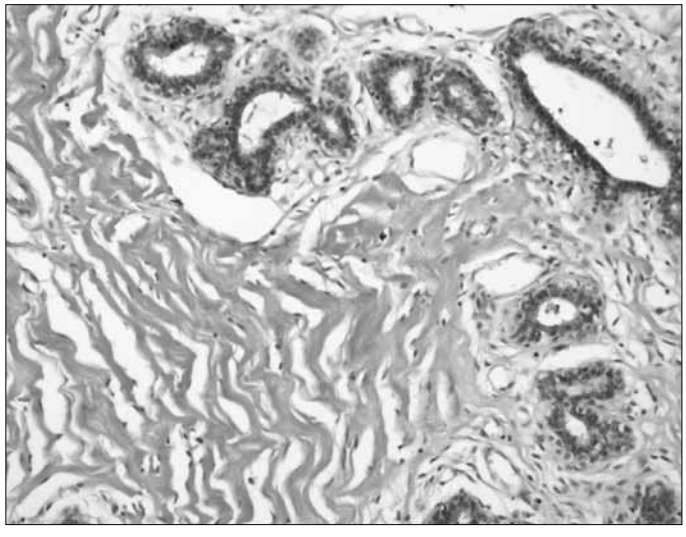

Figure 1. The mass was found to be well-encapsulated and simply

DISCUSSION

Fibroadenoma is the most common benign nodule in teenagers, accounting for 67% to 94% of adolescent breast pathology, with fibrocystic disease the next most common diagnosis. The physical examination is often diagnostic and the standardised treatment is just observation (5). Less than 4% of fibroadenomas are represented by a special form described as giant fibroadenomas. These occur typically between 10 and 18 years of age, and these tumours are often very large by the time the patient is seen for consultation, as occurred with our patient. By definition, giant fibroadenomas must be larger than 5 cm in diameter, with a weight of more than 500 g, with progressive growth over two to five months (2). Rapidly growing breast masses can be the result of a giant fibroadenoma, cystosarcoma phyllodes or virginal hypertrophy, in that order of frequency (4, 5). Giant fibroadenomas are always benign and usually occur in adolescents and young adults. Cystosarcoma phyllodes, which might be either benign or malignant, might have similar morphology and pathology, but is a quite separate tumour type. It occurs in an older age group with a mean age of 40 years, with no racial predilection and is rare in adolescents. The malignant variety might metastasis, usually via the bloodstream (4). Giant fibroadenomas should be distinguished from cystosarcoma phyllodes tumours. The distinction is very important because giant fibroadenomas should be treated with the excision of lumps and preservation of the surrounding normal tissue. In cystosarcoma phyllodes, tumours are treated with the excision of both lumps and normal breast tissue (6). Virginal hypertrophy is usually bilateral, but is occasionally unilateral. It typically manifests as diffuse enlargement of the breast without any associated dilated veins. Histological differentiation between this condition and giant fibroadenoma is often difficult. The exact aetiology of these three abnormalities is speculative (4-6). Excessive oestrogen stimulation, end-organ sensitivity and/or lack of oestrogen antagonists have been suggested (2).

There is no role for mammography in the assessment of breast masses in adolescents because of the very poor image quality due to the dense fibroglandular tissue of the young breast. Moreover, the

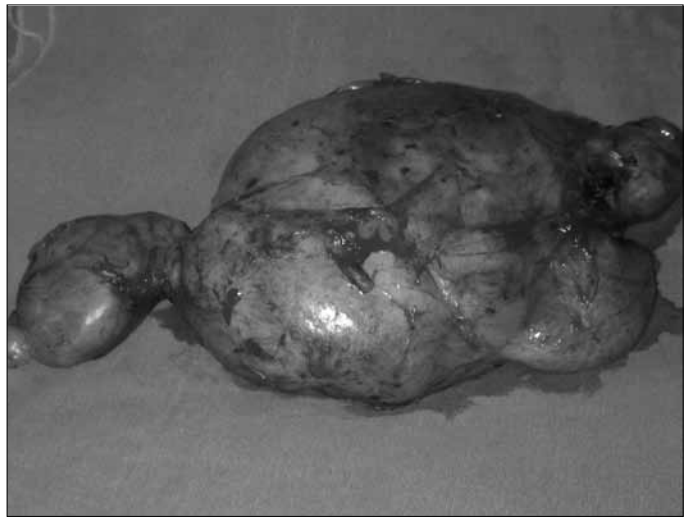

Figure 2. The giant fibroadenoma showed prominent stromal cellularity, often with intraductal epithelial hyperplasia and without atypia (H&E, 20x)

risk of breast cancer in this population is very low. Fibroadenomas are well-circumscribed iso/hypoechoic homogeneous masses, with posterior acoustic transmission by ultrasonography. They may be ovoid, round or macrolobulated. Sometimes, they may be indistinguishable from less common fibrous or epithelial masses, such as phyllodes tumours, mammary hematoma and tubular adenoma (2, 7). Giant fibroadenomas are usually avascular (although 33% of them show central vessels) with absent of peripheral cystic changes, which may be seen in a phyllodes tumour. The definitive distinction is made upon histopathological examination (7, 8).

CONCLUSION

The triple test (palpation, ultrasound and core needle biopsy) is considered the gold standard for the diagnosis of breast masses in young adult women under 30 years of age (9). However, adolescents with large or rapidly growing masses need to be managed with surgical excision, since these masses may distort breast architecture and cannot always be distinguished from phyllodes tumours.

Conflict of Interest
No conflict of interest is declared by the authors.

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