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CASE REPORT

Macromastia and Bilateral Axillary Breast Hypertrophy: A Case Report

Macromastia Septentrional et le Sein Axillaire Bilatéral Hypertrophient : Un Rapport de Cas

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ABSTRACT

BACKGROUND: **Breast hypertrophy presents at puberty or thereafter. It is a condition of abnormal enlargement of the breast tissue in excess of the normal proportion. Gland hypertrophy, excessive fatty tissue or a combination of both may cause this condition. Macromastia can be unilateral or bilateral.**

OBJECTIVE: **To present a case of massive bilateral gigantomastia with huge bilateral hypertrophy of the axillary breasts.**

METHODS: **Review of the prentation, clinical and investigative findings aswell as the outcome of surgical intervention of a young Nigerian woman with bilateral severe breast hypertrophy and severe hypertrophy of axillary breasts.**

RESULT: **The patient was a 26-year-old woman who presented with massive swelling of her breasts and bilateral axillary swellings, both of six years duration.. In addition to the breast pathology, she also suffered significant psychological problems. The breast ultrasonography confirmed only diffuse swellings, with no visible lumps or areas of calcification. She had total bilateral excision of the hypertrophied axillary breasts, and bilateral breast amputation with composite nipple-areola complex graft of the normally located breasts.The total weight of the breast tissues removed was 44.8 kilogram.**

CONCLUSION: **Macromastia of this size is very rare. This case to date is probably the largest in the world literature. Surgical treatment of the condition gives a satisfactory outcome. WAJM 2007; 26(3): 250 – 252.**

Keywords: **Bilateral Macromastia, Bilateral Axillary Breasts Hypertrophy, Nigerian woman.**

RESUMÉ

Contexte: *L'hypertrophie de sein présente à la puberté ou par la suite. C'est une condition d'agrandissement anormal du tissu de sein dépassant la proportion normale. L'hypertrophie de glande, le tissu grasse excessive ou une combinaison des deux peut causer cette condition. Macromastia peut être unilatéral ou bilatéral.*

Objectif: *Pour présenter un cas de gigantomastia bilatéral massif avec l'hypertrophie bilatérale énorme des seins axillaires*

Méthodes: *La revue du prentation, les conclusions cliniques et d'investigation aswell comme l'issue d'intervention chirurgicale d'une jeune femme nigériane avec l'hypertrophie de sein sévère bilatérale et l'hypertrophie sévère de seins axillaires.*

Résultat: *Le malade était une femme de 26 ans qui a présenté avec l'accroissement massif de ses seins et ses accroissements axillaires bilatéraux, les deux de six durée d'années. . En plus de la pathologie de sein, elle a souffert aussi des problèmes psychologique significatifs. L'ultrasonography de sein a confirmé seulement diffuse des accroissements, avec aucuns tas ou aucuns secteurs visibles de calcification. Elle a eu l'excision bilatérale totale de l'a hypertrophié des seins axillaires, et l'amputation de sein bilatérale avec la mamelon-aréole composée greffe complexe des seins normalement localisés. Le poids total des tissus de sein enlevés était 44,8 kilogrammes ;.*

Conclusion: *Macromastia de cette taille est très rare, le cas de thise pour dater est probablement le plus grand dans la littérature de monde. Le traitement chirurgical de la condition donne une issue satisfaisante.WAJM 2007; 26(3): 250 – 252.*

Mots clés: *Macromastia bilatéral, l'Hypertrophie de Seins Axillaire Bilatérale, la femme nigériane.*

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INTRODUCTION

The normal enlargement of the female breast usually occurs over a period of 3 to 5 years.[1] During this time, all the breast components proliferate. The final size of the breast depends on several factors including body habitus, genetics, nutrition and general well being[1]. Variation in hormone levels has not been proven to play any significant role in the final breast size attained[1].

The terms macromastia, gigantomastia, breast or mammary hypertrophy, are used interchangeably in the literature[2]. Gigantomastia is defined as amount of breast tissue resected from one breast weighing 1,800g or more.[2] This condition is sometimes associated with obesity (pseudogigantomastia), pregnancy (gravidic), or neoplasia[2].

We hereby present a case of massive bilateral gigantomastia with huge bilateral hypertrophy of the axillary breasts.

CASE REPORT

The patient was a 26-year-old woman who presented to our specialist service with massive swelling of both breasts and bilateral axillary swelling, both of six years duration. She was apparently well until six years prior to presentation when she noticed gradual but progressive increase in the size of her breasts. This was initially thought to be part of normal breast development. However, she became apprehensive when she observed swelling in both axillae.

Two years later, she became pregnant, and both the normal breasts and the axillary swellings increased in size considerably within a short period of time. Although the pregnancy was carried to term, the baby died at the age of five months of unknown cause. Menarche and her only pregnancy were at 15 and 22 years of age respectively.

She lost both parents when she was young and had very limited support from her extended family. Because of her very large breasts she was isolated and perceived by many to be abnormal. Her first husband abandoned her for the same reason and, two years later, suffered a similar fate with her second husband. There was however no family history of abnormal breast swelling.

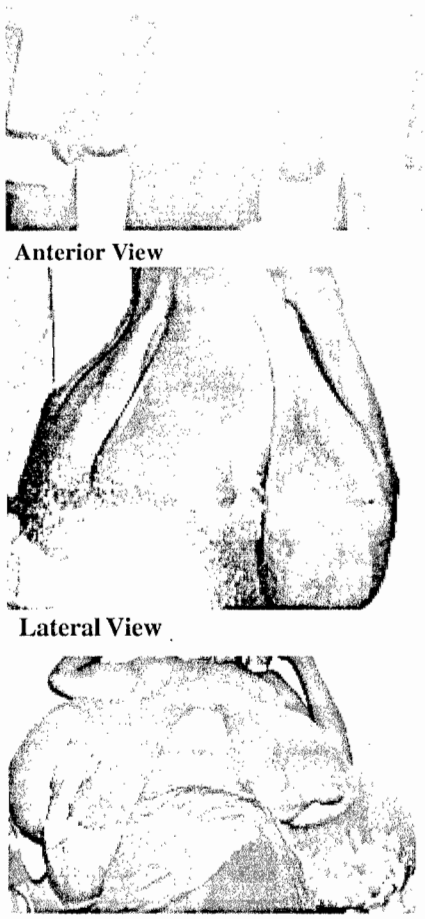

Fig 1. Pre-operative appearance of patient's breasts.

On examination, she was anxious and disturbed. Her weight was 89 kg with a height of 1.5m. There were massive swellings of both breasts and the axillary breasts all extending below the groin and the hip joints. The upper limbs were usually in the abducted position (Fig. 1). The swellings were diffuse with no palpable lump. There were skin changes: areas of hypopigmentation and stretch of the nipple and the areaola, submammary crease irritation and rashes. There was no areola or nipple on the axillary swellings. Apart from kyphoscoliosis, other general and systemic examination findings were essentially normal A diagnosis of bilateral massive macromastia and bilateral axillary breast hypertrophy was made. In addition to the breast pathology, she also suffered significant psychological problems.

The results of laboratory and radiological investigations were all normal. The breast ultrasound confirmed only diffuse swellings, with no visible lumps or areas of calcification. She had total bilateral excision of the hypertrophied axillary breasts, and bilateral breast amputation with composite nipple-areola complex graft of the normally located breasts.

The procedure was done under general anaesthesia with endotracheal intubation. The total weight of the breast tissue removed was 44.8kg. Histology of the excised tissue showed hypertrophy with no evidence of malignancy in the sections examined. Although we lost the nipple-areola complex, the outcome was satisfactory to both the patient and the surgeons (Fig 2). Three years follow up has so far been uneventful.

DISCUSSION

During puberty and gestation periods, there is physiological enlargement of the breast. However, occasionally, there can be abnormal enlargement. Macromastia can be unilateral or bilateral and can occur in combination with ptosis, a term used when the nipple has descended below the inframammary crease[3]. Macromastia varies in severity from mild (less than

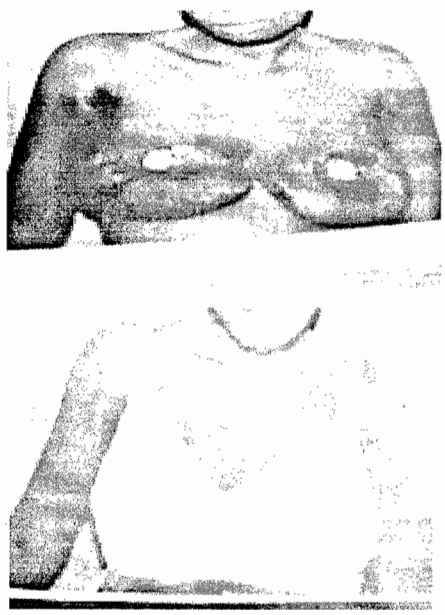

Fig 2. Postoperative view of the two breasts, upper panel. Lower panel shows the breasts now accommodatable within brassiere.

300g) to moderate (300 – 800g) to severe (greater than 800g)[3]. The case presented was not only bilateral and massive but also involved both axillary breasts.

The aetiology of macromastia is generally unknown; in some cases however, hormonal excess and/or target organ hypersensitivity have been incriminated[4,5]. Although endocrine imbalance seems a plausible explanation[4,5], hormonal assay in many cases fails to produce conclusive evidence. An isolated case of hyperprolactinaemia with macromastia was reported in the literature[6], but to our knowledge, no other similar case has so far been reported. There have been few odd cases of macromastia following treatment with D-penicillamine [7]. Target organs hypersensitivity or increase in the number of receptors in the breast is another plausible pathogenetic mechanism[4,5]. Lafreniere et al[4], studied oestrogen, progesterone, steroid and androgen receptors and were all found to be normal. No major studies have so far been carried out to confirm target organ hyper-responsiveness. A unifying hypothesis for this condition is yet to be described.

Although in some cases, marked enlargement of the breast may occur in normal pregnancy [5], in this case however, it is unlikely that this was completely so; especially since the abnormal size of the breast preceded the pregnancy and continued after delivery. In a recent report from Ibadan [8], three cases were reported. The patients were 15, 22, and 18 years old, and the weight of the breast tissue removed were 1,200g, 590g and 540g respectively. The delay in presentation as in this case is common in this environment. This could be attributable to lack of awareness of the availability of treatment and the fact that the condition is neither life threatening nor immediately debilitating[8]. Ignorance and poverty are also contributory factors to late presentation.

Massive enlargement of the breast can be caused by Brodie's disease (giant fibroadenoma, cystasarcoma phylloides), sarcoma, colloid carcinoma, filarial elephantiasis and benign hypertrophy[9,10]. However, while others are unilateral, benign hypertrophy is usually bilateral. Macromastia caused by fibroadenoma, cystasarcoma phylloides and virginal hypertrophy is generally thought to be due to exaggerated response to normal hormonal stimulus. Thus, a generalized response would result in hypertrophy while a localized response may result in fibroadenoma[1].

Surgery has an important role in the management of macromastia. The surgical options are reduction mammoplasty, breast amputation, subcutaneous mastectomy and total mastectomy. Our patient had excision of the hypertrophied axillary breasts and bilateral breast amputation with free nipple-areola complex grafts. Although she lost the nipple-areola graft, the spot became hyperpigmented and cosmetically satisfactory. The main aims of treatment are the removal of excess breast parenchyma, correction of the displaced nipple-areaola complex and reconstruction of the stretched skin and occasionally, removal of eczematous and ulcerated skin[11].

In conclusion, simultaneous macromastia and bilateral axillary breast hypertrophy of this size is rare. Surgical treatment consisting of excision of the axillary breast and bilateral breast amputation with free nipple-areola complex grafts gives a physically, socially and psychologically satisfactory outcome.

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REFERENCES

1. Fisher W, Smith J W. Macromastia during puberty. *Plast Reconstr Surg.* 1971; **47:** 445 – 451.
2. Gliosci A, Presutti F. Virginal gigantomastia: validity of combined surgical and hormonal treatments. *Aesthetic Plast Surg.* 1993; **17:** 61 – 65.
3. Grippando FR, Kennedy DC.Breast Reduction, Liposuction only. http://www.emedicine.com/plastic/topic525.htm
4. Lafreniere R, Temple W, Ketcham A. Gestational macromastia *Am J Surg.* 1984; **148:** 413 – 418.
5. Boghdadly S, Pitkanen J, Hassonah M, Saghier M. Emergency Mastectomy in Gigantomastia of pregnancy: A case report and Literature Review. *Annals of Saudi medicine* 1997; **17:** 220 – 222.
6. Stavrides S, Hacking A, Tiltman A, Dent DM. Gigantomastia in pregnancy. *Br J Surg.* 1987; **74:** 585 – 6.
7. Desautels JE. Breast gigantism due to D-penicillamine. *Can Assoc Radio J* 1994; **45:** 143 – 144.
8. Adebamowo CA, Fasika OM, Ladipo JK. Reduction mammoplasty for unilateral breast hypertrophy. *East Afr Med J.* 1994; **71:** 207 – 209.
9. Browse NL. The Breast. In: Norman L. Browse, (editor). An introduction to the symptoms and signs of surgical diseases. 1st ed. London. Edward Arnold publishers; 1986. p. 276-278.
10. Farrow JH, Ashikari H, Breast lesion in young girls. *Surg Clin North Am.* 1969; **49:** 261 – 269.
11. Carlson GW, Bostwick J. Aesthetic surgery for benign disorder of the breast. *World J Surg.* 1989; **13:** 761 – 764.