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PREGNANCY AND PUBERTY**

## **CASE REPORT: BILATERAL MASSIVE GIGANTOMASTIA UNRELATED TO PREGNANCY AND PUBERTY**

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### **ABSTRACT**

#### **Introduction**

Gigantomastia refers to benign progressive breast enlargement to a degree that requires breast reduction surgery to remove more than 1.5kg weight of tissue on each breast. Several factors have been postulated as origin of gigantomastia which was the basis of its classification. These include hormonal, drugs and autoimmune factors among others.

#### **Case**

A 32-year old P<sub>2</sub>+0 (2 alive) woman with history of progressive bilateral breast enlargement of 5 years with associated mastalgia and back pain. It started two and half years after her last confinement. She was not on any drugs which could cause gigantomastia. The patient had bilateral reduction mammoplasty done under general anaesthesia.

#### **Conclusion**

This idiopathic gigantomastia is a rare type of gigantomastia as pregnancy, puberty and/or drug were not implicated in this patient.

**Keywords:** Gigantomastia; preganancy; puberty; mammoplasty

### **INTRODUCTION**

Gigantomastia was first described in the literature in 1648. It is a condition characterised by progressive breast enlargement that requires removal of >1.5kg tissue per breast. Herein, we present a case of idiopathic gigantomastia where reduction mammoplasty and free nipple graft were done to obtain satisfactory result.

### **CASE PRESENTATION**

A 32yr old P<sub>2</sub>+0 (2 alive) woman presented with progressive bilateral breast enlargement of 5 years duration which increased in size until there were no brassiere that could size any of her breasts. There was associated mastalgia, back pain and ulceration of the skin of the breasts. Her last confinement was about seven and a half years before presentation. She was not on any hormone containing pills and there was no history of such in her family. The enlargement was enough to cause discomfort while sitting, standing or walking. There was no co-morbidity.

On examination, she was a young woman with massively enlarged breasts (figure 1). There were scars of healed ulcerations on

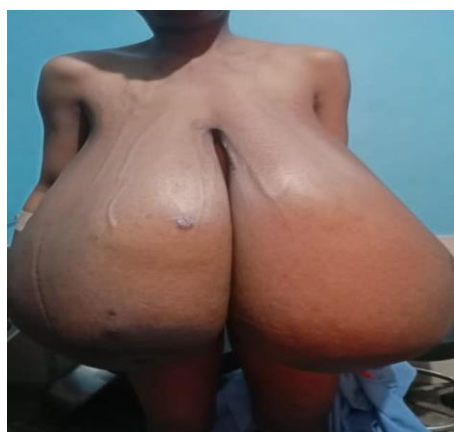


both breasts, with obvious engorged veins on the breasts, more on the right. The nipple-areola complex was normal bilaterally.

On palpation, the breasts were not tender, and there was no palpable mass, no galactorrhoea and no associated lymphadenopathy. The breast circumference was 82cm on the right and 78cm on the left. The chest circumference was 185cm.

Laboratory investigations done included complete blood count, erythrocyte sedimentation rate (ESR), serum calcium, serum oestrogen, progesterone and serum prolactin assay. The results were in the normal range.

Ultrasound scanning revealed diffuse hypertrophied breast parenchyma with thickened skin, no area of pus collection seen and axilla on the two sides were normal. Fine needle aspiration cytology revealed normal breast tissue.



**Figure 1:** Bilateral gigantomastia (at presentation)

She was subsequently worked up for inferior pedicle-wise pattern mammoplasty under general anaesthesia with preparations for massive intraoperative blood loss. She was intubated with intravenous ketamine (150mg) and intubation was facilitated with 100mg suxamethonium. Maintenance of Anaesthesia was with 1-2% Isoflurane and intermittent administration of intravenous pancuronium. Two size-16G cannulae were

secured in addition to the insertion of a CVP line. In the course of the surgery, it was noticed that the pedicle length was 60cm (which implies that the chances of losing the nipple areolar graft and necrosis post-op was almost 100%). Thus, the team opted for breast reduction, amputation of the elongated pedicle and free nipple areola grafts. She had 5units of whole blood transfused with 2 units of FFP. The breast tissue excised weighed 13kg (right) and 12kg (left).

She was monitored in the ICU postoperatively. She was on morphine 4mg 4hrly and i.v paracetamol 1gm 8hly. She was discharged from the ICU on postoperative day 4. She spent another 6 days on the ward before she was discharged home for follow-up at the out-patient clinic. She was on follow up for 7months with no signs of recurrence before she was discharged from the clinic. The immediate post-operative appearance and the appearance at six months post-operation are shown in figures 2 and 3 respectively.



**Figure 2:** Immediate post-operative appearance



**Figure 3:** Appearance at 6 months after the procedure

## DISCUSSION

Gigantomastia as an entity does not have a standard definition but has been described mostly as breast enlargement (usually bilateral) that necessitates surgical intervention (mastectomy or reduction mammoplasty) where not less than 1.5kg of breast tissue was resected.<sup>1</sup> In this case, 13kg on the right and 12kg on the left were resected from the breasts. Gigantomastia have been found in unilateral form, though rare.<sup>2</sup>

There are different factors that have been linked to the origin of gigantomastia. These include hormonal influence (gestational gigantomastia and juvenile gigantomastia), immunological factors and drugs.<sup>3,4,5</sup> It is sometimes idiopathic.<sup>6</sup>

In this index case, gigantomastia was bilateral, not related to pregnancy as the last confinement was two and half years to the onset of the breast enlargement and not related to drugs as she was not on any contraceptives and had no routine use of any drug. Also, there was no history or examination finding suggestive of autoimmune disorder in the patient. Hence, it was considered idiopathic. Dancy *et al* did a review of 115 cases of gigantomastia; out of these cases, 41 were gestational gigantomastia, 57 were juvenile gigantomastia, 4 cases were drug-related and 13 cases were idiopathic although on further evaluation, 3 out of the idiopathic cases were due to systemic lupus erythematosus (SLE).<sup>7</sup>

The available treatment options are conservative hormonal treatment, mastectomy and mostly reduction mammoplasty. Inferior pedicle wise pattern mammoplasty with nipple areola graft was the option in the index case as the pedicle length was more than 60cm coupled with the weight of the breast which was enormous and discomforting for the patient. Despite all efforts to preserve the nipple areola graft, it

eventually got lost in the process of healing as seen in the 6-month follow up picture.

## CONCLUSION

This idiopathic gigantomastia is a rare type of gigantomastia as pregnancy, puberty and/or drug were not implicated in this patient. Reduction mammoplasty remains an option to provide immediate relief of symptoms. Adequate preparation must be made for blood and blood products as intra-operative blood loss is a major challenge.

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