

Isolated Gigantomastia in Pregnancy: A Case Report

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Abstract: ***Introduction:** Gestational Gigantomastia (GG) is rare clinical condition, which manifests itself by characteristically exacerbating and incapacitating hypertrophy of the breast only during pregnancy. Incidence range from 1 in 28, 000 to 1 in 100, 000 pregnancies. **Case Report:** In this case scenario we are reporting a patient at 8 months of amenorrhea, with bilateral Gigantomastia, complaints of dyspnea and backache since 1 month. Patient was investigated for the same and all were within normal limits. Patient underwent Emergency Lower Segment Cesarean Section (LSCS) at 34 weeks of gestation in view of doppler changes with cerebroplacental reversal (CPR) for the fetus. Post surgery patient was followed up to note the size resolution. **Discussion:** The aetiology, risk factors and pathogenesis still remains unclear, Although the closest explanation is the hormone prolactin elevation during pregnancy can be considered responsible, other hypothesis include increased breast receptor sensitivity or underlying autoimmune conditions. Management is commonly surgical method by mastectomy, but for those who are not willing for surgical management, they can be conservatively treated with Bromocriptine. **Conclusion:** Gestational Gigantomastia is idiopathic clinical condition; effective treatment is to undergo breast reduction and reconstruction surgery. In this patient, she was treated medically.*

Keywords: Gestational Gigantomastia, Breast, Case report, Mastectomy, Reconstruction, Bromocriptine

1. Introduction

Gigantomastia in pregnancy, also known as Gestational Gigantomastia (GG) or as Gravid macromastia. It is defined as breast weighing over 1.5kg or 3% of the patients total body weight⁽¹⁾. The first case of GG was described by Palmuth in 1648, since that time onwards about 100, 000 cases have been reported⁽²⁾. The incidence of this condition was report as 1 in 28, 000 and 1 in 100, 000 pregnancies between the years 1935 to 1960 and 1989 to 2009 respectively⁽²⁾.

Gestational Gigantomastia (GG) occurs rapidly during pregnancy and post delivery it regresses gradually, it recurs in subsequent pregnancies. During puberty if Gigantomastia occurs it is called as 'Pubertal Macromastia'⁽³⁾. Breast hypertrophy occurring in GG is a benign, progressive and occur in one breast or both breast. The extreme rapid growth in this condition, results in causing muscular discomfort, postural changes and the over stretching of the skin, which can lead to ulcerations.

2. Case Report

A 28 years patient Gravida 2, Para 1, Live 1, presented at 32 weeks of gestation for antenatal visit with massive enlargement of bilateral breast. Patient complaint of severe backache, breathlessness and marked breast tenderness, she gave history of increase in breast size by 8 times more than the prior size before pregnancy and also similar condition during her 1st pregnancy, which had completely resolved after her delivery. There was no similar family history. On Physical examination showed bilaterally enlarged breasts with dilated and superficially indurated veins noted, Milk discharge noted. Measurements of the right breast from nipple to midline 76cm, laterally measured 72cm, whereas left breast measured from nipple to midline 66cm and laterally 72cm, Chest circumference 150cm at 32 weeks of gestation. Ultrasound done showed hypertrophied fatty

fibroglandular tissues with increased parenchymal vascularity. Serum Prolactin was 152µg/L. Patient underwent emergency LSCS at 34 weeks of gestation in view of fetal growth restriction and doppler changes, delivered a live baby boy of 1.1kg.

Since the patient was not willing for breast feeding was started on Tab. Bromocriptine 2.5mg twice daily for 1 week. Post-operative day 4 her breast measurements were as follows, right side from nipple to midline 66 cm, laterally 74 cm, left side from nipple to midline 56cm, laterally 70 cm and chest circumference 146cm. Patient was discharged and asked for regular follow up on post-operative day 14 when measurements were taken they showed not much of difference, right side breast from nipple to midline measured 64cm and laterally 68cm, left side from nipple to midline showed 53 cm and laterally 62cm and chest circumference 142cm. Patient was last reviewed on post-operative day 100, there was a noticeable difference in the size of both breast, right breast measured from nipple to midline as 38cm and laterally 60cm, left breast measured from nipple to midline 36cm and laterally 55cm, chest circumference of 130cm noted.



Figure 1: 32 weeks of gestation

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Figure 2: Postoperative day 4



Figure 3: Postoperative day 14



Figure 4: Postoperative day 100

3. Discussion

Gigantomastia is a rare clinical condition, risk factor and etiopathogenesis is not well understood though there are multiple theories put forward, including autoimmune diseases that get aggravated during pregnancy, receptor sensitivity of hormones, excessive hormone estrogen, progesterone and prolactin release, there are also drug induced Gigantomastia⁽³⁾. Recurrence has been noted in

patients with prior history of Gigantomastia or those who have undergone reduction mammoplasty, which could be due to the retained hypertrophic tissues⁽¹⁾.

Based on the aetiology A Dancey et al in 2008, had proposed a classification consisting mainly of 3 groups.

Group 1 - idiopathic causes, these cases can be managed with breast reduction and tends to have good prognosis. Group 2 is endogenous hormone release, like in case of pregnancy and puberty age group that presents with excessive and aggressive breast growth. This group will require surgery for breast reduction and might also have recurrence in future, hence need for multiple surgical exposure. Group 3 consist of the Drug induced cases such as, penicillamine, neohetazone, cortisone and cyclosporine, they usually does not require any surgical intervention, simple cessation of the drug and follow up is only required⁽⁴⁾.

There are studies that shows cases of Gigantomastia with normal hormonal level, the possible explanation was given by P Wolner-Hanssen et al in 1981 as the increased sensitivity of prolactin receptors, the patient underwent reduction mammoplasty post-delivery 5 months later⁽⁵⁾. In 2009, Lanzon et al, presented a case of SLE with hypoenestrogenism who developed Gigantomastia, patient was treated with prednisone and successfully underwent reduction mammoplasty. The study had concluded that SLE and other autoimmune conditions trigger elevated prolactin and estrogen levels causing Gigantomastia associated with these immune conditions⁽⁶⁾.

Study conducted by P. J. et al, showed that penicillamine-induced breast Gigantomastia can be treated with drug Danazol⁽⁷⁾. Another study conducted by A Troccola et al, in 2011 also explains use of cortisone for ovarian cancer treated that led drug induced Gigantomastia⁽⁸⁾.

Since Gigantomastia incidences more common in pregnant and puberty, the most appropriate theory to explain the excessive breast enlargement is excessive hormonal release.

To make a diagnosis of benign isolated gestational Gigantomastia other diseases should be ruled out. Some of the differential diagnosis that should be considered are infectious mastitis, juvenile hypertrophy of breast, fibroadenoma or fibrocystic changes of breast, familial history of Gigantomastia, phyllodes tumour and last to rule out any underlying breast malignancies.

To rule out the other differential diagnosis of Gigantomastia investigations like, hormone workup (estrogen, progesterone, prolactin), anti-ds DNA, ANA, anti-thyroglobulin and other common investigations like ESR, CPR should be considered. To ruled out any risk of malignancy MRI and CT should be done, this will help to locate metastasis, in case of any⁽¹⁾.

To treat GG, depends upon individual cases, some can be treated conservatively giving proper support to the breast with brassiere, preferred option in patients with raised prolactin level is treatment with bromocriptine. Other medications used are tamoxifen, steroids etc. But majority of

cases require surgical management. In this case, patient was not willing for surgical management, hence was medically managed. Patients who have done reduction surgery rather than total mastectomy bilaterally, had higher recurrence rate.

4. Conclusion

Gigantomastia is not a common condition, such cases full study should be done. The finally treatment is surgical, which is total bilateral mastectomy with breast reconstruction. But recurrence chances are there with simple mastectomy and reduction mammoplasty cases.

References

- [1] M. R. Swelstad, B. B. Swelstad, V. K. Rao, and K. A. Gutowski, "Management of gestational Gigantomastia" *Plastic and Reconstructive Surgery*, vol.118, no.4, pp.840-848, 2006.
- [2] Ezem BU, Osuagwu CC, Opara KA, GestationalGigantomastia with complete resolution in a Nigerian woman. *BMJ case reports*.2011 Jan 1; 2011: bcr0120102632.
- [3] S. N. Leis, B. Palmer, and G. Ostberg, "Gravid macromastia. Casereport, "Scandinavian Journal of Plastic and Reconstructive Surgery", vol.8, no.3, pp. 247-249.1947.
- [4] A. Dancy, M. Khan, J. Dawson, and F. Peart, "Gigantomastia-a classification and review of the literature," *Journal of Plastic, Reconstructive and Aesthetic Surgery*, vol.61, no.5, pp.493-502, 2008.
- [5] P. Wolner-Hassen. B. Palmer, N. Sjoberg, and B. Astedt," Gigantomastia" *ActaObstetricia et Gynaecologica Scandinavica*, vol.60, no.5, pp, 525-527, 1981.
- [6] A. E. Lanzon and S. V. Navarra, "Gigantomastia in a patient with systemic lupus erythematosus successfully treated by reduction mammoplasty", *Lupus*, vol.18, n0.14, pp.1309-1312, 2009.
- [7] P. J. Taylor. C. Cumming, and B. Corenblum," Successful treatment of D-penicillamine-induced breast gigantism with danazol, " *The British Medical Journal*, vol.28, no. 6261, pp.362-363, 1981.
- [8] A Troccola et al, "cortisone-induced Gigantomastia during chemotherapy" *G Chir*, vol. 32. no.5, pp.266-269.