



A RARE CASE REPORT OF GESTATIONAL GIGANTOMASTIA

Obstetrics & Gynaecology

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KEYWORDS

INTRODUCTION :

Gestational gigantomastia is a rare disorder characterized by excessive and rapid enlargement of both the breasts resulting in edema and venous congestion of the breast tissue seen in pregnancy mainly during second trimester. Around 100 cases of gestational gigantomastia have been reported in medical literature.¹ The first ever case was reported by Palmuth in 1648.² The incidence has been reported to be between 1 in 28 000 to 1 in 100 000 pregnancies.³

The underlying cause of the rapidly growing breast connective tissue is thought to be due to increased sensitivity to prolactin, estrogen and progesterone. The effect of hormones can occur from the onset of pregnancy or between 16 and 20 weeks gestation. The abnormally enlarged breast of the women can result in discomfort, itching, reddish discoloration the skin, infection, ulceration and also local necrosis. There has been increased rate of recurrence of the disease in the subsequent pregnancies. The choice of treatment depends on the severity of the condition and aimed at improving the patient's comfort throughout her pregnancy.

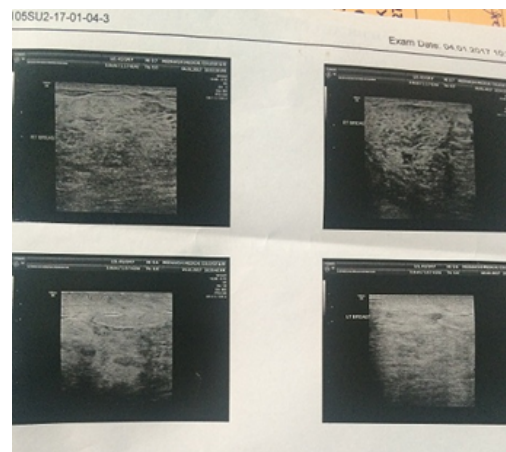
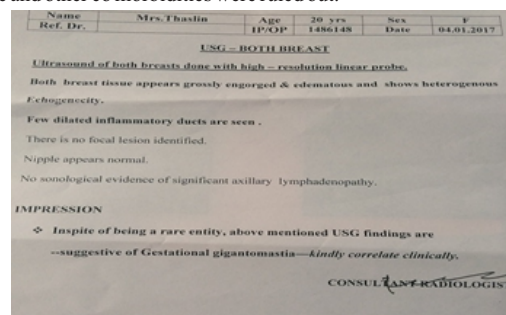
CASE REPORT :

20 years old, Mrs. X, primi gravida, married since 10 months presented in our antenatal clinic at 19 weeks of gestation with excessive enlargement of breasts since 2nd month of conception with the nipples nearly reaching the umbilicus. She has been reported of the same complaint in the nearby clinic where reassurance was given. She came with pain in both the breasts on touch associated with itching on and off. The excessive enlargement causes discomfort for her and there was reddish discoloration of the overlying skin of the breast tissue.



On examination, she is thin built and moderately nourished woman, not anemic. On inspection, both the breasts were uniformly enlarged. The skin appears reddish in colour and there were no ulcerations or necrosis. Nipple was flattened and the areola was increased in diameter. Dilated veins are seen over the upper quadrant of both the breasts. On local examination, both the breasts were soft in consistency, with measurements from Right Axilla to Right side nipple was 28cms and Left axilla to Left side of nipple was 30cms. Right breast circumference was 51cms and Left breast circumference was 54cms.

On per abdomen examination, uterus was corresponding to the period of gestation with good fetal heart sounds. Systemic examination was done and other co morbidities were ruled out.



Diagnosis of gestational gigantomastia was made and confirmed with ultrasonography of both the breasts were both the breasts are edematous and showed heterogeneous echogenicity and with few dilated inflammatory ducts were seen. There was no sonological evidence of significant axillary lymphadenopathy as there were no signs of any ulceration or necrosis of the breast tissue. Hence patient was counselled and reassurance was given and also advised for adequate breast support. Patient was also started on supportive progesterone therapy and hematinics.

Bromocriptine is the most widely used drug in the treatment of gestational gigantomastia. Bromocriptine aids in healing of necrotic breast ulcerations, arrests breast enlargement and promotes regression. 12 Bromocriptine must be used with careful monitoring if given during the pregnancy as it is known to cause fetal intrauterine growth retardation. 4 Tamoxifen, hydrocortisone, diuretics and medroxyprogesterone are other options of conservative treatment. 13

DISCUSSION :

Gestational gigantomastia can occur during any pregnancy . A prior history of GG increased the risk for the condition in subsequent pregnancies. The etiology and pathogenesis of gestational gigantomastia remain elusive, but many theories have been proposed, including excessive production of estrogen or prolactin, hormone receptor sensitivity, and underlying autoimmune disease triggered by pregnancy. This exaggerated increase in breast volume occurs most commonly at the end of first trimester, coinciding with the period of peak gonadotropin production, thus giving strength to the hypothesis of hormonal association, were the hormones such as estrogen, human chorionic gonadotropin, human placental lactogen and prolactin. The estrogen receptor sensitivity to prolactin might have accounted for breast hypertrophy and enlargement.

The first case of gestational gigantomastia was reported by Palmuth in 1648. 2 Rezaei *et al* described a case of gestational gigantomastia in a Guinean woman who underwent reduction mammoplasty 8 months post partum. 4 Agarwal *et al* have reported a case of gestational gigantomastia in an Indian woman in 2013, who was lost to follow-up. 5 Gestational gigantomastia is a rare condition of massive breast enlargement during pregnancy. The incidence has been reported to be between 1 in 28 000 to 1 in 100 000 pregnancies. 3 Dafydd *et al* defined gigantomastia as excess breast tissue that contributes more than 3% of the patient's total body weight. 6 The risk factors and aetiology are not well understood. The incidence is more common among Caucasian women. 7 The gigantomastia may occur during any pregnancy 8 with an increased risk if previous pregnancies were complicated by gestational gigantomastia. 9 10 Some theories regarding the aetiology include excessive oestrogen or prolactin production, increased hormone receptor sensitivity and underlying autoimmune disease triggered by pregnancy. 11

Cho *et al* reported a patient of gestational gigantomastia was administered with tamoxifen for 1 year after reduction mammoplasty surgery. However, the aspect of effectiveness of tamoxifen could not be concluded. 14 Surgical intervention is indicated in cases of massive haemorrhage, ulceration, sepsis and breast necrosis. 15 16 Simple mastectomy and reduction mammoplasty present a chance of recurrence due to remnant breast tissue, bilateral mastectomy with reconstruction is the treatment of choice in women who desires future pregnancies. 17 18 An equally important aspect of this disease is the psychological trauma faced by the patient due to her physical appearance. 11 14

CONCLUSION :

Gestational gigantomastia is a complication whose etiopathogenesis have yet to be fully clarified however, it has been speculated that placental hormones may trigger the condition. Typically some patients may have spontaneous resolution in the post partum period and some may require reduction mammoplasty or mastectomy during pregnancy and breast reconstruction during puerperium decided based on the severity of the condition. Several cases of gigantomastia have been described in association with autoimmune disorders, such as systemic lupus erythematosus (SLE), myasthenia gravis, Graves' disease, and rheumatoid arthritis. Physical complications seen in gigantomastia include rapid breast enlargement leading to severe pain and tenderness, ulcerations, necrosis, and hemorrhage. Secondary infection (e.g., puerperal mastitis, pyogenic abscess) and sepsis may also occur in the absence of appropriate medical treatment. Apart from

physical complications, patients are often traumatized due to their physical appearance and suffer psychological trauma, depression, and sociophobia. Differential diagnoses for GG with normal prolactin levels may include infectious mastitis, juvenile breast hypertrophy and/or normal pregnancy changes, benign breast conditions such as fibrocystic change or fibroadenoma, and underlying malignancy.

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