GESTATIONAL GIGANTOMASTIA: A CASE REPORT

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ABSTRACT

Introduction: Gestational Gigantomastia is rare condition characterized by rapid, and unnecessary breast growth, that reduced quality of life in pregnancy. The pathophysiology is not fully clear, although hormonal especially prolactin changes in pregnancy are considered responsible.

Case Reoprt: In this case patient presented with bilateral Gigantomastia for past 10 months. Her hormonal levels within normal range. There was no complication occur in her gestation. She was not willing for normal delivery. So, elective cesearen section was performed at 39 weeks. After delivery her breast size remain same and there was no sign of resolution. At 2 months postpartum, she was undergoing total bilateral mastectomy and then breast reconstruction.

Discussion: The etiology and pathophysiology of this disease still unknown but variors studies suggest that it is due to hormonal imbalance. Hematology, endocrinology and biopsy should be performed for diagnose this disease. Conservative management with bromocriptine is recommended. Total mastectomy and breast reconstruction is indicated after delivery or in case of any complication during pregnancy.

Conclusion: The effective treatment for this condition is surgical interventions for women who wish future pregnancies.

Keywords: Breast, Gigantomastia, Gestational, Mastectomy, Reconstruction

INTRODUCTION

Gigantomastia in pregnancy, also known as gestational gigantomastia (GG) and gravid macromastia, is rare disease that presents as excessive increase of breast in pregnancy [(1)]. In 1648, Palmuth was reported first case of GG. This condition occurs in 1 out of every 100,000 pregnancies in Pakistan [(2)]. Lewison et al. describe this disease as " True gigantomastia develops rapidly during pregnancy, undergoes regression after delivery, and recurs with subsequent pregnancies" [(3)].

The increase of breast size in puberty and pregnancy is a physiological event. Breast hypertrophy is a benign progressive increase in breast size, which can occur in only in one breast or both breasts [(4)] . Gigantomastia is a exceptional breast disorder characterized by rapid, diffuse and excessive breast hypertrophy (> 1 to 5 Kg). The extremely rapid growth of the breasts can result in intense heat; the enlargement can cause muscular discomfort and over stretching of the skin envelop, which can lead in some cases to ulceration. The swelling can suppress the milk supply, pinching off the milk ducts, and leading to mastitis [(5)].

The etiology of this condition is unknown but various theories including endocrine imbalance, hyperprolactinemia and target organ hypersensitivity. In most of the cases, acute enlargement of breast resolved in the postpartum period [(6)].

CASE REPORT

A 30 years female Gravida2, Para1, Abortion1, came to surgical department with massively enlarged bilateral breasts for past 10months, which started at 24weeks of gestation and increased progressively. At her initial visit to gynecologist at 28 weeks, doctor advice to continue the pregnancy. She was not willing for normal delivery due to disease process. So, an elective cesarean delivery was performed at 39 weeks with delivery of 2.8kg boy with Apgar scores of 7 (1 min) and 8 (5min). She did not give breast feeding to her new born baby boy because she faced difficulty. She took Tablet Brotin for stop breast feeding. After 2 months of delivery breast size did not resolve then she was admitted to surgical department for bilateral mastectomy. There was no family history of similar condition. There was history of Typhoid fever and Hepatitis B which she had been treated before her marriage. Her physical examination revealed normal vital signs. Her weight was 75kg and body mass index (BMI) of 28 kg/m2. Her weight was 45kg before pregnancy. Breast examination showed bilateral breast enlargement, large areola periphery,

large pigmented area and retracted nipples. Left breast large lump in the upper quadrant which is non-tender, mobile and not warm. Measurement on the right breast were circumference 45cm, from axilla to nipple 16cm, and nipple to midline 20cm. Measurements on the left breast were circumference 50cm, from axilla to nipple 18cm, and nipple to midline 20cm. Her lab investigation showed white blood cell count 11.5, hemoglobin 10.2g/dl, ESR 38mm/hr. Other investigations were within normal range including hormonal levels. At early period of gestation ultrasound breast was done in which left breast showed hyper proliferative breast parenchyma, index measure 5cm and shows internal cystic changes with mild increased peripheral vascularity. It was located at 10 O'clock per areolar location and it showed fibroadenoma on biopsy. Other similar lesions also noted at 1, 2 and ¾ O' clock location. Right breast shows fibro adenoma at 3 and 4 O'clock location. Extensive subcutaneous edema seen in both breasts.

At 2 months postpartum, Bilateral mastectomy were performed. Her right breast specimen was 10kg and left breast specimen was 15kg. Histopathology of breast specimen showed mammary hyperplasia with no malignancies. Patient discharged till wound healing. Again, she was admitted to plastic surgery department for breast reconstruction. Bilateral silicon breast implanted. Patient discharged in stable condition. Patient maintain her health physically and psychologically.

DISCUSSION

GG can occur in any pregnancy. The etiology and pathophysiology of this condition is unknown but various theories including endocrine imbalance, hyperprolactinemia and target organ hypersensitivity. This condition can occur in any pregnancy and it can also increase the risk in following pregnancies if there was previous history of this condition [6]. Regardless of excessive estrogen and prolactin levels, it is uncertain whether these levels, commonly raised in pregnancy, are pathogenic. A few instances of this condition have been described with autoimmune problems, which include systemic lupus erythematous (SLE), myasthenia gravis, Graves' illness, and rheumatoid arthritis [7].

Gigantomastia is considered a benign condition, it can be physically disabling if not treated. The main symptoms of gigantomastia is an excessive overgrowth of breast tissue in one breast (unilateral) or both breasts (bilateral). Other symptoms include: breast pain (mestalgia), pain in the shoulders, back and neck, redness, itchiness, warmth on or underneath the breasts, poor posture and loss of nipple sensation. This condition is thought to be triggered by pregnancy hormones, usually during the first trimester [8].

Physical problems seen in GG consist of rapid breast enlargement leading to severe pain and tenderness, ulceration, necrosis, and hemorrhage. If case of inappropriate medical treatment, there is chance to get secondary infection (e.g., puerperal mastitis, pyogenic abscess) or sepsis. Sometime recently making a determination of GG, other disease process must be measured. Differential diagnosis for GG with typical prolactin levels may incorporate irresistible mastitis, adolescent breast hypertrophy and ordinary pregnancy changes, benign breast condition such as fibrocystic changes and fibro adenoma [9]. Our patient had no complications in full gestation. Instant workup for this condition includes: Hormone profile (estrogen, progesterone, and prolactin), anti –ds DNA, ANA, RF, anti-smith, CCP, ant thyroglobulin, and anti-TPO, further to ESR and CRP, to explore any auto immune disorder. To assess malignancy, perform breast biopsy, any locating frightened of malignancy have to be observed up with MRI of head and CT scan of abdomen, thorax, and pelvic to take be aware location of metastasis [1].

GG treatment has varied on cases. Conservative management include appropriate brassiere support, great skin cleanliness, absence of pain, and suitable diet [10]. While conventional managing in maximum cases has resulted in spontaneous resolution of tissue hypertrophy within the postpartum period, medical and surgical mediations are justified in cases that fall flat to relapse or show with the above-mentioned problems [11]. Conservative treatment with bromocriptine is preferred option for the treatment, but outcomes have been variable. In some patients, where prolactin level is raised or regular, bromocriptine treatment in pregnancy is recommended. Fetal progress has to be observed to prevent intrauterine growth retardation [12]. .As our case no medical treatment was recommended. Furthermore, tamoxifen, hydrocortisone, diuretics, and medroxyprogesterone are included in the conservative treatment [9].

In this case, bilateral mastectomy with breast reconstruction was performed. Mastectomy and breast reconstruction is indicated in the absence of resolution after delivery or any complications during gestation [13, 14]. The most effective treatment for gestational gigantomastia is surgical intervention. Additionally, it is seen that patients who underwent reduction mammoplasty rather than bilateral total mastectomy have chance of recurrence; the reappearance being credited to reserved hypertrophic tissue after mammoplasty. So, bilateral mastectomy with

reconstruction is the treatment of choice in women who wish for future pregnancies [2, 15].

CONCLUSION

GG is an uncommon condition. To diagnose full work up as well as endocrinology, hematology and biopsy must be done. Finally, the definitive treatment is surgical. Total bilateral mastectomy with reconstruction is recommended for women who desire for future pregnancies, meanwhile there is chance of reappearance with simple mastectomy and reduction mammoplasty cases.

Conflicts of Interest

No conflicts of interest declared by authors.

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