



A CASE REPORT BILATERAL GIGANTOMASTIA WITH CONGENITAL GUM HYPERTROPHY IN 12 YEAR- OLD - GIRL

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ABSTRACT

Introduction A benign disorder known as juvenile gigantomastia causes disproportionately large breasts for a child's age, either unilaterally or bilaterally, during puberty. There are a number of hypotheses that have been put forth, but the exact cause of gigantomastia is still unknown. The imbalance in endogenous hormone production is included in the widely accepted notion. When gigantomastia develops in adolescence, it causes a miserable condition, Physical and psychological issues result from it. physical issues including shoulder and back pain. Poorly fitting clothing, a bad body image, and difficulty exercising are secondary social issues. Here, we describe the case of a 12-year-old girl who underwent bilateral breast reduction surgery after being diagnosed with bilateral gigantomastia and congenital gum hypertrophy. **Report of the case** In this case report, we provide a novel observation in a 12-year-old girl with congenital gum hypertrophy and juvenile gigantomastia (rapid and exaggerated growth in breast size during puberty in a year, with consequent skin ulcerations). She had a BMI of 20.6 kg/m². No auxiliary lymphadenopathy was present. Prolactin, follicle-stimulating hormone, and serum estradiol levels were all within normal ranges. The results of the medical genetic study did not link to any syndrome. The breast's radiological imaging revealed nothing neoplastic-looking. Debulking of the gums was planned, and a reduction mammoplasty was performed. No recurrence has been documented following a follow-up of 4 months. We conducted a thorough literature search but were unable to locate any cases that were similar. **Discussion** In the unusual occurrence of gigantomastia, breast development continues until adolescence. There are a number of theories that have been put up, but the precise underlying aetiology for gigantism has not yet been fully understood. The following techniques were used in the treatment of gigantomastia: (1) Surgical management, (2) preoperative or postoperative medical therapy, (3) postoperative medical therapy alone, and (4) medical therapy. **Conclusion** Adolescents readily accept reduction mammoplasty for gigantism, which can lead to better physical and psychological consequences. Since congenital gum hypertrophy and gigantism have only sometimes been discussed in the literature, this case will add to our understanding and aid future research into the best way to treat this crippling condition.

KEYWORDS :

INTRODUCTION

A benign disorder known as juvenile gigantomastia causes disproportionately large breasts for a child's age, either unilaterally or bilaterally, during puberty [1]. The literature uses a variety of terminology to describe this phenomenon, including juvenile gigantomastia, virginal hypertrophy, and juvenile macromastia [2].

It is a rather uncommon condition. Neinstein revealed that gigantomastia accounts for just 2% of all breast lesions in this population of patients after reviewing 15 papers on breast lesions in adolescents over the course of approximately 40 years [3]. In their meta-analysis of case reports from 2011, Hoppe et al. found 65 recorded instances between 1910 and 2009 [4]. From 2010 to 2017, nine additional cases were found in the Hisham et al. study [5]. To the best of our knowledge, our own literature search turned up an additional 10 cases from 2017 to the present, however in our study, this is the first instance with bilateral gigantomastia with congenital gum hypertrophy documented.

There are a number of hypotheses that have been put forth, but the exact cause of gigantomastia is still unknown. The widely accepted explanation includes an imbalance in the production of endogenous hormones [6]. Some speculate that it might be caused by an increasingly unhealthy lifestyle, a diet high in hormones, and obesity [7].

When gigantomastia develops in adolescence, it causes a miserable condition known as peripuberty. Physical and psychological issues result from it. physical issues including shoulder and back pain. Negative body image and ill-fitting apparel are secondary causes of social problems. As a result, it is crucial to do suitable research and manage the disease as early as possible. Surgery for breast reduction is the best

option and delivers enhancement. Hormonal treatments, surgery, and a combination of these are used to treat this condition and avoid recurrence [8].

Here, we described the case of a 12-year-old girl who underwent bilateral breast reduction surgery after being diagnosed with bilateral gigantomastia and congenital gum hypertrophy.

Case Report

A 12-year-old girl was referred for plastic surgery because she had developed massive, progressive, bilateral breast enlargement over the course of a year, with congenital gum hypertrophy in addition to an ulcer in the lower quadrant of both breasts near the inframammary folds and severe neck and back pain that kept her away from participating in social activities and keeping her from school. She has not just reached menarche. She had no notable family or medical history, and she wasn't taking any medications. Pre op Pic in Figure.1



Figure 1. (R) Bilateral breast enlargement (L) Gum Hypertrophy

She was found to be a thin girl who weighed 40 kg and had a normal BMI of 20.6 kg/m². The breast was pendulous,

excessively big, and asymmetrical, with inverted areolas. The left breast tumour measured 19 cm by 15 cm, and the right breast bulge was 24 cm by 20 cm. Both lumps were distinct, tightly bound, and unattached to the underlying tissues. An oval-shaped mass with a skin ulceration region was visible in the right breast. On both breasts, there was no nipple discharge or blood. Axillary lymphadenopathy wasn't present.

Routine haematological analysis within the normal range. Follicle-stimulating hormone, prolactin, and serum oestradiol levels are all within the normal range. According to a medical genetic study report, there is no syndrome association. Interstitial oedema was visible on an ultrasound of the breast. The results of the breast's magnetic resonance imaging indicated bilateral gigantomastia, right intramammary lymphadenopathy, and skin surface ulceration on the right breast. With the growth of fibroglandular tissue, many widespread cystic channels can be seen including all four quadrants of the breast.



Figure 2. Marking of both the breast

Bilateral breast reduction with superomedial pedicle flap was done after a conventional Wise-pattern skin resection was designed. 4900 grams of tissue in total, or 12.25% of the patient's entire body weight, had been removed (Figure 3). An inverted-T scar was used to close the resulting defect. There was no need for an intraoperative blood transfusion. Following the operation, the Histopathological examination report showed juvenile hypertrophy of the bilateral breast (Gigantomastia). The postoperative period went without a hitch, and the patient was released from the hospital on the tenth day. (Figure 4)

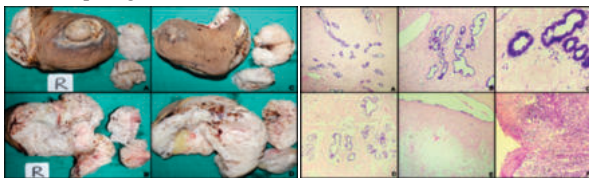


Figure 3 (R) Gross specimen of bilateral breast (L) histopathological Examination

The postoperative period went without a hitch, and the patient was discharged from the hospital on the tenth day. (Figure 4)



Figure 5 (R) Post-operative Day 10 (L) follow up after 10 months)

DISCUSSION

In the unusual occurrence of gigantomasatia, breast development continues until adolescence. Giant fibroadenomas, phyllodes tumours, and cancerous tumours such lymphomas and sarcomas are all included in the differential diagnosis. 2% of all primary malignant breast lesions in females younger than 25 years old arise despite the rarity of breast cancer in this age range [8].

There are a number of theories that have been put up, but the precise underlying etiology for gigantism has not yet been fully understood. Increasing oestrogen or progesterone receptor expression, an imbalance in endogenous hormone production, end-organ hypersensitivity to normal amounts of circulating oestrogen, and excessive local oestrogen production are some of the prevalent explanations [9].

Although autoimmune and hereditary factors have also been mentioned, the illness is mostly sporadic. PTEN, a gene that suppresses the growth of tumors, has more recently been theorized to have a hereditary foundation for this condition. On a mouse model, Li et al. found in 2002 that deletion and mutation of the PTEN gene have been associated with early lobuloalveolar development, excessive ductal branching, postponed involution, decreased apoptosis, and mammary epithelial hyper proliferation [10]. The clinical link is still not evident, though. The PTEN gene mutation investigation on two case reports' pathologic samples was determined to be negative [11]. Our patient had no family history of autoimmune illnesses and was not connected to any of them.

Rarely is a breast ultrasound examination helpful in ruling out alternative illnesses. For identifying breast architecture and pathological abnormalities, MRI may be more helpful. For more than a year, the breast tissue in this situation grows quickly and significantly. The patient's enormous breast growth makes it difficult for her to obtain clothes that fit and causes her social shame, which prevents her from participating in social and academic activities. The teenager with breast enlargement experiences severe emotional suffering, as documented in adults with macromastia [12]. Significant societal pressure to fit in causes this to happen. Gignastomastia is characterised by embarrassment, unhappiness with one's appearance, low self-esteem, and disordered eating patterns [13].

The following four Strategies were used in the Gignastomastia therapy modalities: (1) Surgical management, (2) Preoperative or Postoperative Medical Therapy, (3) Postoperative Medical Therapy, and (4) Medical Therapy Alone [6]. Reduction mammoplasty across both breasts was effectively carried out in this case. The significant mass resection led to the choice of the T-inverted design, which was made prior to the procedure [14].

It effectively reduces discomfort and aids in eradicating skin breakdown and infection frequently linked to breast augmentation, which has a good impact on physical and psychological consequences. Reduction mammoplasty has been shown in studies to significantly improve one's perception of one's body [15]. The top objective is to treat this problem as soon as possible. This means it is advised to have a properly planned operation after a time of observation to verify that breast growth has stabilised. Reduction mammoplasty with or without a free nipple graft or, in severe situations, a subcutaneous mastectomy and immediate or delayed breast reconstruction are the surgical options for this problem.

In an effort to address this illness, medical therapy with hormone modulators like tamoxifen, danazol, or bromocriptine has been tried [16]. The efficacy and safety of

medication in long-term usage are yet uncertain, nevertheless.

CONCLUSION

In peripuberty, a rare and benign disorder called juvenile gigantomastia causes large and rapid growth of the breast tissue. Adolescents readily accept reduction mammoplasty for gigantism, which can lead to better physical and psychological consequences. Since congenital gum hypertrophy and gigantism have only sometimes been discussed in the literature, this case will add to our understanding and aid future research into the best way to treat this crippling condition.

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