Case Report

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Bilateral Gestational Gigantomastia Complicating Pregnancy: A Challenging Case Refractory to Conservative Management

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ABSTRACT

Gestational gigantomastia (GG) is a rare condition characterized by excessive and rapid breast enlargement during pregnancy, resulting in significant physical discomfort, functional limitations, and significant psychological impact. We present a case of a 33-year-old multiparous woman in her third pregnancy, who developed severe bilateral GG by 16 weeks of gestation. Despite initial conservative management, including analgesia and pharmacological (bromocriptine) therapy, the condition worsened causing functional impairment and recurrent mastitis requiring repeated hospital admissions. The pregnancy was electively induced due to physical limitations at 35 weeks of gestation; however, the labour was complicated by obstruction, necessitating an emergency Cesarean section. Postpartum the patient developed severe lactational mastitis complicated by sepsis necessitating intensive care unit admission. After recovery and cessation of breastfeeding, she elected to undergo Wise-pattern bilateral reduction mammoplasty with free nipple-areolar complex grafting four months into her postpartum period. The procedure provided substantial functional relief and a favorable esthetic outcome. This case highlights the potential complexity of managing GG and the need for individualized care. Although conservative treatments may offer temporary relief, surgical intervention is often necessary in severe cases.

Keywords: Gestational gyganomastia, breast feeding, lactational mastitis, reduction mammoplasty

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Key Points

- Gestational gigantomastia is a rare and debilitating condition that can lead to severe physical and psychological impairment during pregnancy often requiring multidisciplinary care.
- Conservative treatments, including pharmacotherapy with bromocriptine may be ineffective in severe cases, necessitating surgical intervention for long term relief.
- Postpartum reduction mammoplasty with free nipple areolar complex grafting offers a safe and effective solution for patients with no future fertility plans, improving both function and aesthetics.

Introduction

Gestational gigantomastia (GG) is a rare condition characterized by rapid and excessive breast enlargement during pregnancy, often due to an exaggerated hormonal response to oestrogen and progesterone (1). While the exact causes are not fully understood, factors such as hormonal imbalance, increased hormone sensitivity, and genetics are believed to contribute (2). GG typically affects younger women, especially during their first pregnancy, with an incidence peak between ages 18 and 30 years (3). Though it occurs in only about 1 in 100,000 pregnancies, GG can cause significant symptoms, such as breast pain, skin damage, infections, and functional impairment (4). Risk factors include obesity, a family history, and multiparity (5).

Management strategies typically commence with conservative approaches, which include analgesia, mechanical support, and psychological counseling (6). Pharmacological therapy using dopamine agonists (e.g., bromocriptine) or anti-oestrogens may be trialed during pregnancy in more severe cases (7). However, definitive treatment may necessitate surgical intervention, including breast reduction or mastectomy, particularly when complications arise or conservative measures fail (8). Postpartum surgical management is

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frequently indicated if hypertrophy persists (9). This report describes a case of bilateral GG managed with bilateral reduction mammoplasty and free nipple-areolar complex (NAC) grafting following failure of conservative treatment, highlighting clinical decision-making, surgical technique, and outcomes.

Case Presentation

A 33-year-old woman, with a history of two uncomplicated pregnancies, presented with severe bilateral GG during her third pregnancy. Her pregnancy was uneventful until 16 weeks, when she developed rapid breast enlargement, increasing her bra size from 28B to 38E over 12 weeks, making it difficult to find suitable support garments. The excessive breast size severely limited her mobility, and by late pregnancy, she needed help with daily activities (Figure 1). In addition, she experienced severe mastalgia, skin breakdown, hyperpigmentation, striae distensae, and erythema.

The patient's condition required frequent medical attention, and she was managed by a medical team including an obstetrician-gynecologist, a breast surgeon, antenatal care midwife, and a psychologist throughout this period. Ultrasonography and core biopsy of a clinically abnormal area revealed findings consistent with mastitis and pregnancy-related changes without evidence of malignancy or acute infection. Hormonal evaluation revealed normal pregnancy-related values except for elevated prolactin. Therefore, the medical team initially opted for conservative management with pain relief, supportive garments, and psychological counseling. Consequently, pharmacological therapy with bromocriptine, a dopamine agonist, was initiated to reduce breast size. Despite conservative measures, her condition deteriorated, significantly affecting daily life. She was hospitalized three times for recurrent mastitis and treated with intravenous antibiotics. Following obstetric consultation, early induction at 35 weeks was attempted but failed due to obstructed labor, necessitating emergency Cesarean section.

Despite medical advice, the patient continued breastfeeding postpartum. Six weeks later, she developed sepsis from lactational mastitis, requiring intensive care unit admission. Ultrasound showed multiple breast collections, which were drained. Cultures confirmed *Streptococcus viridans* infection. After recovery, surgical intervention was offered and scheduled four months postpartum. Breast volume had decreased following cessation of lactation, making surgery more feasible (Figure 2A). She underwent bilateral Wise-pattern reduction mammoplasty with free NAC grafting. A total of 3.4 kg of breast tissue was excised. The surgical team opted for free nipple grafting, as a very long pedicle would compromise the blood supply for the NAC. Her postoperative course was uncomplicated. She was discharged on day 3, with drains removed on day 6, following adequate reduction in output (<50 mL/24 h) (Figure 2B).

Outpatient reviews were conducted biweekly for three months with good healing and satisfactory cosmetic outcome (Figure 3).

Figure 1. Gestational giganotomastia giving rise to significant discomfort

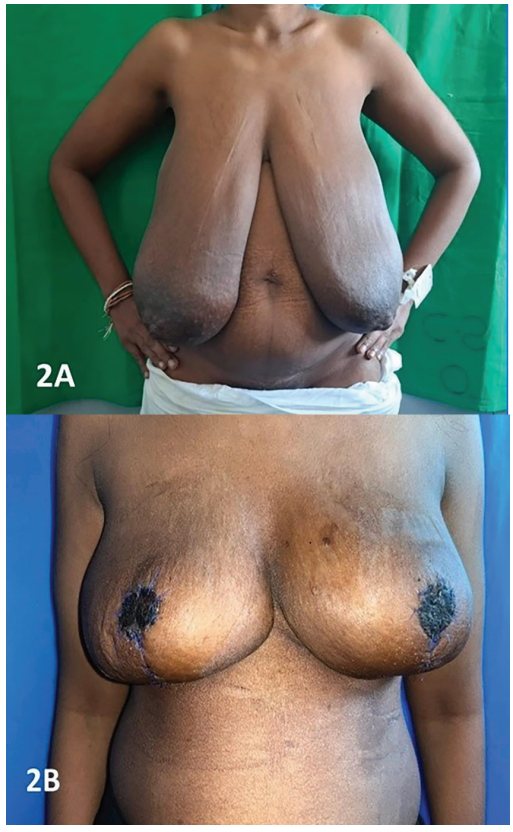

Figure 2. Pre op image (2A), post op 2 weeks image (2B)

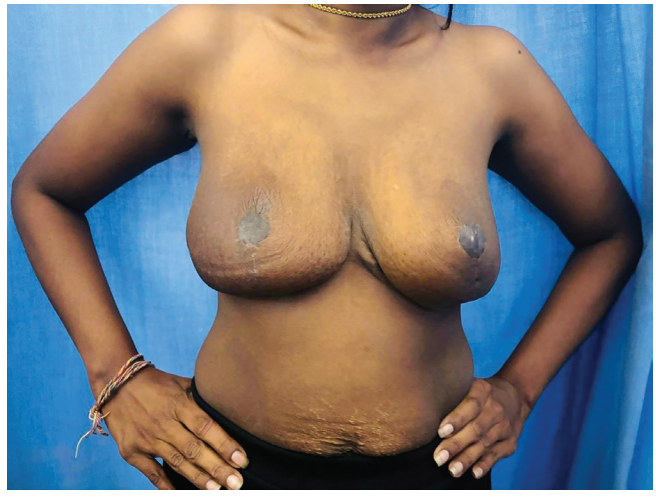

Figure 3. Post-op 3 months image

Informed written consent was given by the patient for clinical details and anonymized images for data collection and publication purposes.

Discussion and Conclusion

GG requires consideration of several key factors, including the patient's age, pregnancy-related complications, and the timing and management of the condition (2). Although GG most commonly presents during the first or second pregnancies, this patient developed symptoms during her third gestation, with onset and escalation in the second trimester, notably earlier than the third trimester onset commonly cited (10). The rapid increase in breast size-rising from 28B to 38E within 12 weeks-demonstrates the potential severity of GG and its substantial impact on quality of life, consistent with prior reports (4).

Elevated prolactin levels in the patient support the suggestion of a correlation between prolactin and GG, though the role of hormone sensitivity at the tissue level may be more influential than absolute hormone concentrations (11). Despite bromocriptine therapy, symptoms persisted, aligning with literature indicating that medical therapy offers limited benefit in severe GG (12).

Obstetric complications, particularly preterm labor and obstructed delivery, are documented in GG cases due to the mechanical challenges posed by enlarged breasts (5). The patient's emergency Cesarean section after failed induction reinforces this association. Postpartum complications are also common, as seen with her episode of lactational mastitis progressing to sepsis, a serious but known risk in GG (13).

Surgical intervention remains the definitive treatment when conservative therapies fail or complications arise (8). Mastectomy and reduction mammoplasty are the primary options, with the choice dictated by severity, patient preference, and reproductive plans (14). As with our patient, for women with no desire for future fertility, reduction mammoplasty is often preferred due to its ability to preserve the breast contour and provide a more esthetically acceptable result (9). In this case, free NAC grafting was employed given the compromised vascularity anticipated with a traditional pedicle technique, which is corroborated by existing surgical guidelines (15).

Delaying surgery until several months postpartum is consistent with best practice to reduce risk of complications, such as delayed wound healing and nipple necrosis, particularly common due to the increased vascularity of the breast in the immediate postpartum period (13). The four-month delay allowed for tissue involution and decreased congestion, resulting in a smoother surgical course and improved cosmetic outcome.

GG is a rare but potentially severely debilitating condition with the potential for significant physical, psychological, and obstetric complications. This case highlights the need for multidisciplinary management and an individualized approach, beginning with conservative management and transitioning to surgical intervention when appropriate. A carefully tailored management strategy can significantly enhance overall quality of life and long-term patient satisfaction. This is especially relevant, given that GG primarily affects young women.

Ethics

Informed Consent: Informed written consent was given by the patient for clinical details and anonymized images for data collection and publication purposes.

Footnotes

Authorship Contributions

Surgical and Medical Practices: S.P., L.G., W.W., K.R., J.S., S.H.R.S., K.W.; Concept: S.P., L.G., W.W., K.R., J.S., S.H.R.S., K.W.; Design: S.P., L.G., J.S., S.H.R.S., K.W.; Data Collection or Processing: S.P., L.G., K.R., S.H.R.S., K.W.; Analysis or Interpretation: S.P., L.G., W.W., J.S., S.H.R.S., K.W.; Literature Search: S.P., L.G., W.W., K.R., J.S., S.H.R.S., Writing: S.P., L.G., W.W., K.R., J.S., S.H.R.S., K.W.

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