



## Case Report

# Bilateral breast necrosis secondary to gestational gigantomastia

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## ABSTRACT

Bilateral gestational gigantomastia (GG) is a very rare occurrence in pregnancy. Life-threatening pressure sores, extensive breast skin and subcutaneous tissue necrosis and sepsis may complicate the disease. Conservative management was instituted on a pregnant lady diagnosed with bilateral GG but she developed extensive breast necrosis and sepsis necessitating bilateral simple mastectomy in the 29th week with significant intra-operative haemorrhage and cardiovascular instability requiring multiple plasma expander infusion, blood transfusion and ICU care.

**Keywords:** Breast necrosis, Bilateral mastectomy, Conservative management, Gestational gigantomastia

## INTRODUCTION

Gestational gigantomastia (GG) is a rare disease characterised by a marked increase in breast size, encountered in the early pregnant state with uncertain definition and pathophysiology.<sup>[1,2]</sup> A hormonal aetiology is strongly suggested in most cases, though evidence of this is tenuous. The disease is classified as type I (idiopathic), type II (hormonal, occurring in puberty and pregnancy), and type III (pharmacologically induced).<sup>[3]</sup>

A precise definition of GG is lacking. The weight of breast tissue excised is used to define it, and 1500 g of breast tissue has been cited, while others cite the actual breast size.<sup>[4]</sup> There is no consensual definition, but the current definition emphasizes the physical and psychological aspects of the disease as the primary criteria for diagnosis. GG occurs between 1 in 28,000 to 1 in 100,000 pregnancies globally.

Hormones in pregnancy are considered important in the aetiology of the disease. This may manifest as hormonal excess, hypersensitivity of the receptors to normal levels of circulating hormones, or a combination of these.<sup>[1,2,5]</sup> The hormones implicated include oestrogen, progesterone, prolactin, testosterone, and cortisol. Thyroxin, growth hormone, insulin, and human placental lactogen are also considered. Clinical work-up of patients often involves assessing the blood levels of these hormones, although normal levels are commonly reported.<sup>[1]</sup>

The definitive treatment of GG remains uncertain. Conservative hormonal therapy with tamoxifen, bromocriptin, danazol, and medroxyprogesterone may produce inconsistent and temporary symptomatic relief. Reduction mammoplasty and simple mastectomy are surgical options and may be associated with a favourable outcome.<sup>[2]</sup> Few cases of GG may lead to life-threatening breast necrosis, sepsis, and death. We present our experience managing our first case

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of GG, who developed extensive breast necrosis and sepsis while on conservative treatment and underwent an urgent bilateral mastectomy.

### CASE REPORT

A 37-year-old pregnant lady was referred at 26 weeks of gestation to a breast unit on account of bilateral massive breast enlargement. She initially presented at a private health facility with the complaints of bilateral breast enlargement, which started with the pregnancy and rapidly progressed between the 8<sup>th</sup> and 12<sup>th</sup> week and became discomforting at 20 weeks due to the weight of the breast on her chest wall causing extreme difficulty breathing and pain on her breast and chest wall from pulling by the breast. To relieve her symptoms, she resorted to sitting in a bent forward position in an armchair with pillows supporting her breasts, and maintained the same position for sleep. She also complained of worsening severe back pain. She was never on any long-term medications, but volunteered a history of similar but mild complaints in a previous pregnancy, which aborted spontaneously with her breasts returning to normal size thereafter. She was unaware of a family history of such a disease.

Examination showed a pregnant lady sitting bent forward on a low stool and in respiratory and painful distress, and with grossly enlarged and supported breasts, which were warm and tender. The left breast was larger. The skin of each breast was hyperpigmented, thickened, and pitted under minimal pressure. Each breast was grossly lumpy with no distinctly defined lumps. The axillary breasts were equally enlarged with no distinct lumps, and the axillary lymph nodes were not enlarged. GG was diagnosed. The hormonal assay for oestrogen and progesterone was normal. Upon review, a team of surgeons and obstetricians instituted symptomatic management, intending for operative delivery at 32 weeks of gestation.

At 27 weeks, she developed multiple superficial discharging ulcers on the antero-lateral aspects of both breasts; the axillary breasts were spared. The ulcers were managed conservatively by dressing and application of topical antibiotics, and her breasts were supported. Her biochemical and haematological parameters were normal, and the pregnancy tests remained positive. Subsequent hormone assays were also normal, and an abdominal scan showed a singleton pregnancy of 25-26 weeks' gestation. Wound culture yielded *Staphylococcus aureus*.

The cutaneous wounds on her breasts deteriorated in the 29<sup>th</sup> week, with extensive necrosis of the skin and subcutaneous tissue [Figures 1 and 2], foul-smelling discharge, and a temperature of 38.1°C. Her respiratory distress worsened. A diagnosis of sepsis was made, and she was switched to



**Figure 1:** Right breast with extensive necrotic overlying skin and subcutaneous tissue.



**Figure 2:** Left breast showing more extensive skin and subcutaneous tissue necrosis.

parenteral antibiotics. An urgent bilateral mastectomy was considered, for which she provided consent.

Mastectomy was performed simultaneously by two surgical teams at the end of the 29<sup>th</sup> week. Haemorrhage was significant, leading to haemodynamic instability, and she received a total of five units of whole blood transfused intra-operatively. The combined weight of the breasts was 25 kg (left 13 kg and right 12 kg). She was managed in intensive care for 48 h immediately post-operatively until she became stable. However, she aborted a dead fetus after 48 h.

The histology revealed extensive pseudo-angiomatous stromal hyperplasia, diffuse lymphatic dilatation, and interstitial



**Figure 3:** Patient at two weeks showing scars and markedly regressed bilateral axillary breasts.

infiltrates without evidence of malignancy. At the 16-week post-operative review, she was stable, and both axillary breasts had significantly reduced in size [Figure 3]. She did not consent to reconstructive procedures as previously planned.

## DISCUSSION

GG is a rare, physically and psychologically distressing benign condition during pregnancy, characterised by rapid and excessive breast growth, often occurring in the first or second trimester.<sup>[6]</sup> Variants of the disease include idiopathic, juvenile, and drug-induced types.<sup>[7]</sup> Only seven case reports of the disease were found among Africans in the literature, out of about 100 cases globally, suggesting its rarity on the continent.<sup>[8]</sup> However, misdiagnosis and/or under-reporting may contribute to its low incidence in Africa.<sup>[9]</sup>

A sudden and rapid increase in the size of the breast is the most common presentation of GG. This was observed by the patient in her first trimester and created excessive tension and discomfort in her breasts. Subsequently, her most distressing presentation was difficulty in breathing while recumbent and inability to mobilize. The weight of the breasts on her chest wall limited respiratory excursions, leading to difficult respiration, so she adopted sitting bent forwards with her breasts supported on pillows, which improved her breathing but further limited her movement and also caused her severe back pain. Breast skin ulceration is a known complication of GG; it arises from venous and lymphatic congestion. This occurred suddenly in the patient and rapidly progressed to necrosis and infection, and a sudden deterioration in her health.

The definitive management of GG has evolved with improvements in medicine, obstetrics, anaesthesia, and surgery, including a better understanding of the disease. Medical therapy with bromocriptine was, for a while, the first-line treatment for the disease. It stops breast growth but may

not reduce breast size<sup>[10]</sup> and carries the risk of intra-uterine growth retardation.<sup>[11]</sup> Mastectomy or breast reduction are alternative treatments that improve outcomes.<sup>[4]</sup> Bilateral mastectomy is a treatment option for GG and a life-saving treatment for cases complicated by breast necrosis.

Care of the patient with GG requires a multi-disciplinary approach, which may be challenging in settings where the relevant trained personnel, expertise, or facilities are lacking; this was our experience. Our establishment lacks the facilities for early preterm care, and we were constrained to plan for conservative care of the patient and planned operative delivery at 32 weeks. Her poor obstetric history and the fact that her breasts returned to normal size after her last pregnancy, and her desire to breastfeed her baby, which is important in our setting,<sup>[12]</sup> influenced our cautious approach.

Mastectomy was a late consideration and the result of the severity of the breast necrosis. Assembling two surgical teams for the simultaneous mastectomy was unusual in our practice, so we adopted this approach as a part of our safety considerations for the patient and the foetus. Positioning her breasts away from her chest wall to avoid compromising her ventilation, intraoperative required side-boards and assistants to support the breasts.

The large intraoperative blood volume loss was due to increased breast tissue vascularity,<sup>[13]</sup> which culminated in haemorrhagic shock, which was actively managed with plasma expanders and whole blood transfusion.

## Summary

GG is a rare but distressing condition in pregnancy requiring specialised care; a multi-disciplinary approach to include capacity building limits morbidity and mortality. Mastectomy should be considered early in the rare event where the GG is complicated with extensive breast necrosis and systemic infection.

## Learning objectives

1. GG may rapidly progress to severe and extensive skin ulceration, subcutaneous tissue necrosis, and life-threatening infection.
2. Simple mastectomy in severe GG can be complicated by severe haemorrhage and haemodynamic instability requiring active treatment.

## CONCLUSION

Gestational gigantomastia is a rare pregnancy-related disease of the breast which may be complicated by breast skin/subcutaneous tissue necrosis and sepsis. Bilateral mastectomy is indicated in severe life-threatening disease.

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## REFERENCE

1. Kasielsk-Trojan A, Danilewicz M, Sruzyna J, Bugaj M, Antoszewski B. The role of estrogen and progesterone receptors in gigantomastia. *Arch Med Sci* 2022;18:1016-20.
2. Cho MJ, Yang JH, Choi HG, Kim WS, Yu YB, Park KS. An idiopathic gigantomastia. *Ann Surg Treat Res* 2015;88:166-9.
3. Nguyen NJ, Sanchez LM, Yassa M, David J, El Khoury M. Idiopathic gigantomastia in a patient on polypharmacy. *BJR Case Rep* 2021;7:20210052.
4. Musa G, Mulami M, Teyangesikayi G. Gestational gigantomastia: A patient case review and literature review. *Med J Zambia* 2018;45:112-16.
5. Rabe FH, Conradie M, Mahoko M, de Villiers RC, Edge J. Gestational gigantomastia complicated by pseudo-angiomatous stromal hyperplasia - A multidisciplinary management approach. *S Afr J Surg* 2024;62:89-91.
6. Rakislova N, Lovane L, Fernandes F, Gonçalves E, Bassat Q, Mocumbi S, *et al.* Gestational gigantomastia with fatal outcome. *Autops Case Rep* 2020;10:e2020213.
7. Fletcher MB, Corsini LM, Meyer D, Osswald SS. Gestational gynaeomastia: A case report and review of the literature. *JAAD Case Reports* 2020;6:1159-61.
8. Abdulahi YM, Zarami AB, Lawan AI, Guduf MI, Farouk HU, Pingiga UH. Gestational gigantomastia: Report of a rare case and literature review. *Borno Med J* 2021;18:1-6.
9. Okere UC, Margenthaler JA, Vanko S, Kennard K. A multidisciplinary approach to gestational gigantomastia management: A case report. *AME Surg J*. 2023;3:47.
10. Türkan H, Gökgez MŞ, Taşdelen İ, Dündar HZ. Gestational Gigantomastia. *J Breast Health* 2016;12:86-7.
11. Logbo-Akey KE, Rakatomalala NZ, M'Bortche KB, Ajaon DR, Dagbe M, N'Timon B, Aboubakari As. Gigantomastia of pregnancy: Complication and treatment cse report at Togo. *Gynaecol Obstet Case Rep*. 2021;7:147.
12. Mangla M, Singla D. Gestational gigantomastia: A systemic review of case reports. *J Mid-life Health* 2017;8:40-4.
13. Junior IV, Freitas R, Budel VM, AmaroLC, Scomacao I, Roca GB, Berry DT. Gestational gigantomastia: How to address this clinical situation. *Rev Bras Cir Plast* 2015;30:134-37.

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