



## **Bilateral Gestational Gigantomastia managed at the Douala Gyneco-Obstetric and Pediatric Hospital: What we learned from a case report.**

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### **Abstract**

Gigantomastia or macromastia is a benign, rare disease of poorly known etiology, manifested by an excessive development of the breasts. We report here the case of a bilateral gestational gigantomastia which was managed medico-surgically at the Douala Gyneco-Obstetric and Pediatric Hospital, with a favorable maternal outcome. Initially, conservative breast reduction surgery was done followed by total bilateral mastectomy due to uncontrolled local infection. Our aim is to explain its diagnostic, therapeutic and prognostic particularities. This case reveals the difficulty of management in the face of this type of clinical picture, sometimes requiring a radical surgical approach.

**Key words:** *Gestational Gigantomastia, Breast reduction, Mastectomy.*

## Introduction

Gigantomastia or macromastia is a rare, benign disease of unknown etiology manifested by an excessive development of the breasts. Four clinical forms have been described in the literature: the juvenile form occurring at puberty, pregnant, drug-induced, and idiopathic [1, 2]. We report here the case of a bilateral pregnant gigantomastia followed at the Gynecological and Pediatric Hospital of Douala.

## Case presentation

We report a case of bilateral pregnant gigantomastia in a 28-year-old high school teacher patient, married, G3P1011, at 16 weeks amenorrhea. She had benefited 2 years earlier from a right breast cystectomy.

She had come to consult for a progressively rapid and exaggerated increase in breast volume over the past year, associated with mastodynia and a fever of 40°C for the past month. She would have benefited from a treatment based on bromocryptine a slight improvement.

His clinical examination on admission revealed: Altered general condition, systemic inflammatory syndrome, moderately pale conjunctivae, large painful breasts with galactorrhea on the left, suppurative and necrotic wounds in the upper external quadrants of the right and lower external quadrants of the left breast. (**Figures 1 and 2**) Upon obstetrical and gynecological examination, we noted a uterine height of 14 cm, the cervix was long and closed at the back.

We diagnosed bilateral superinfected pregnant gigantomastia. Emergency check-ups revealed anemia 6, 3g/dl, CRP elevated to 119mg/l and acute pre-suppurative mastitis on gigantomastia on breast ultrasound.

Initial management consisted of; Hospitalization, injectable iron, local care and ofloxacin + metronidazole antibiotic therapy for 10 days after counseling the patient on the risk of recurrence. Concomitantly, a therapeutic termination of pregnancy was performed. 45 days after wound healing, the patient under general anaesthesia underwent bilateral breast reduction surgery using the inverted T-inverted technique (**Figure 3**).

The early postoperative effects were marked by the suppuration of the right breast flap complicated by a septic shock picture. The latter was treated with vasoactive amines and antibiotic therapy adapted to the antibiotic sensitivity test performed after swabbing of the

suppurated flap (**Figure 4**). After remission of her septic shock, she finally underwent a bilateral mastectomy with uneventful post-operative care (**Figure 5**).

## Discussion

Gigantomastia is defined as an excessive and monstrous enlargement of the breasts with a breast volume of more than 1500 cm<sup>3</sup>, with standards usually ranging from 200 to 350 cm<sup>3</sup>. There are several clinical forms: juvenile gigantomastia, drug-induced gigantomastia, idiopathic gigantomastia, and pregnancy-induced gigantomastia as in our patient [1,2]. It is a rare pathology so the frequency is still poorly evaluated [3]. Lewinson et al. (1960) report 2 cases/56,594 births. A study conducted by Dem et al. (2009) in Senegal had hospital incidence of 1/6,000 pregnancies [4].

According to the literature, etiopathogenesis is not well known [5]. Indeed, there are 04 theories explaining these different clinical entities. The hormonal, genetic, autoimmune and drug theory [6,7]. The hormonal theory applicable to our case is either a hypersensitivity of the circulating prolactin receptors or a hypersensitivity of the breast tissue to a normal concentration of circulating estrogen. Associated with this is an increase in estrogen receptors in the breast tissue [5]. It occurs in multiparous women and does not appear in the first pregnancy. This explains why there is no menopausal gigantomastia.

It is a pathology that occurs in multiparous women, without pathology in previous pregnancies, from the end of the first trimester. No risk factor is found with certainty. The clinic is typical. It is a bilateral breast swelling, rarely unilateral, painful resembling an inflammatory mastitis [3]. This condition is poorly tolerated because of the possible complications that it initially causes physically: mastodynia, osteoarticular pain, skin ulcerations, and postural problems. But these can be psychological and social, loss of self-confidence and difficulty in dressing [8]. All these complications were found in our patient.

The treatment of gestational gigantomastia varies on a case-by-case basis [9]. There is no standard therapeutic approach due to the low number of cases reported in the literature [10]. Treatment is either medical or surgical. The choice of one of these therapeutic modalities depends on the team, the term, the prognosis of the pregnancy and the breast trophic disorders [11]. Most authors consider hormone therapy to be the first-line medical treatment for gestational gigantomastia [1]. Medroxyprogesterone, dydrogesterone, tamoxifen, danazol, androgens or goseroline can be used as medication [12, 13]. Bromocriptine is the most

commonly used, although its results are variable in the literature [7]. Bromocriptine gave a partial response in a few cases, as was the case in our patient [7].

Surgical treatment remains the treatment of choice. Indications depend on: the existence of complications, breast volume, duration of pregnancy, degree of disability and also in case of absence of significant regression on bromocriptine. Our patient responded to these indications. In the first trimester, some authors have proposed therapeutic termination of pregnancy [14]. As was the case with our patient, especially since she presented complications requiring surgical treatment from the outset. Beyond the first trimester, monitoring is recommended until fetal maturation for surgical extraction. There are 2 surgical methods: mastectomy or breast reduction if local conditions allow [15].

Breast reduction uses classic techniques such as the inverted "T" and upper or lower pedicle. The choice of this technique is based on the possibility of monitoring the patient and a secondary mastectomy option in case of failure or recurrence. The choice of mastectomy is based on the possibility of recurrence and on the difficulties associated with a field procedure for inflammatory, necrotic, and engorged breasts [16,17]. In our case we opted for breast reduction after therapeutic termination of pregnancy using the "T" technique after almost 2 months of local care. This conservative approach was unsuccessful, which led to a bilateral radical mastectomy [16, 17].

## **Conclusion**

Gigantomastia is a rare entity, an exuberant form of breast hypertrophy so the causes can be hormonal (pregnancy), drug induced, genetic and autoimmune. Surgical treatment is the treatment of choice, which can very rarely be radical of necessity. Long-term follow-up is required in case of breast reduction or medical treatment as recurrences are possible. In extreme cases a bilateral mastectomy may be indicated.

## **Competing interests**

The authors declare no competing interest.

## **Authors' contributions**

All the authors read and approved the content of the manuscript. All authors also state that they have read and approved the final version of the manuscript.

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## Figures

Title: **U**=Up, **D**=Down, **R**=Right, **L**=Left.

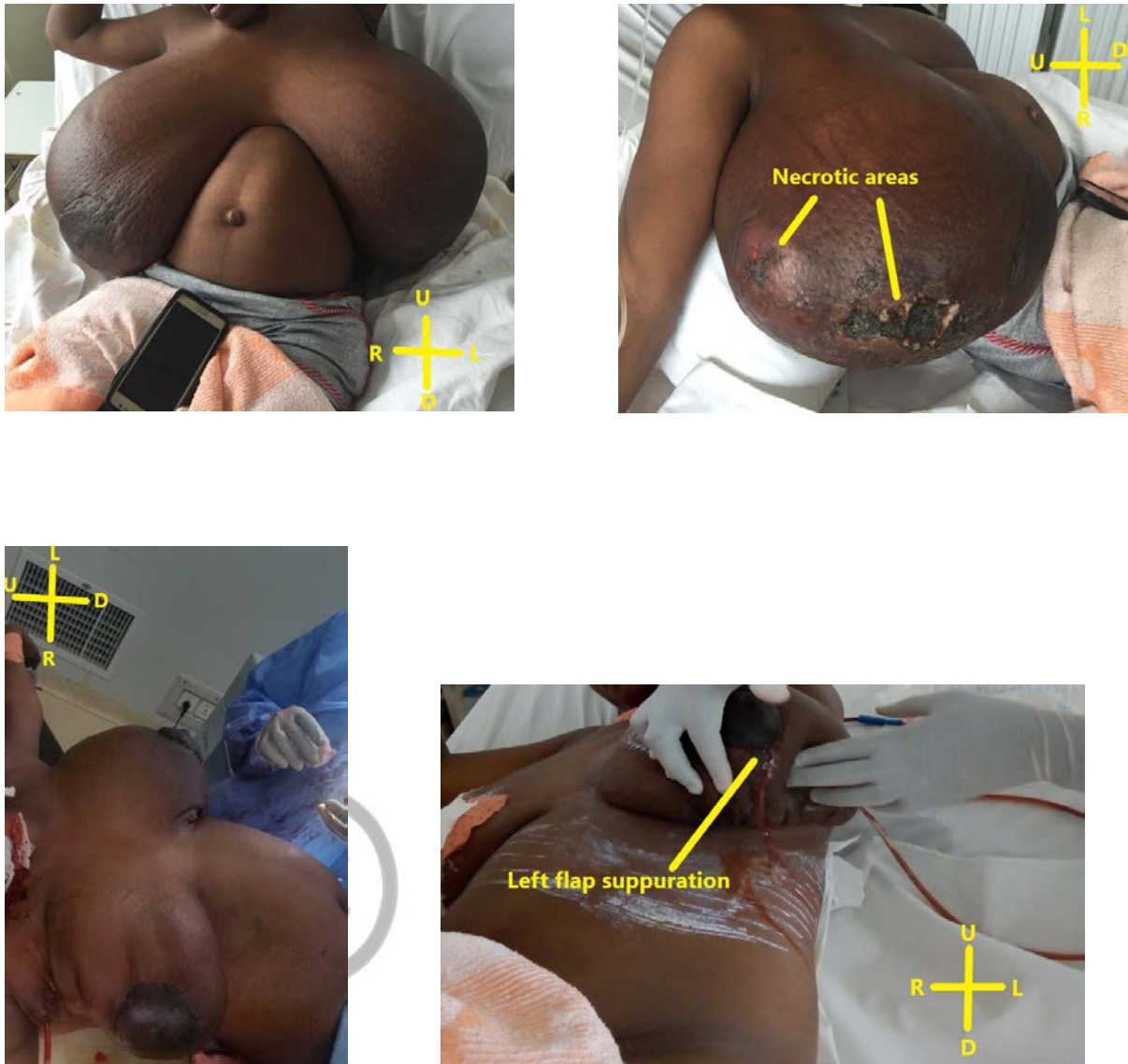


Figure 4: Left flap suppuration

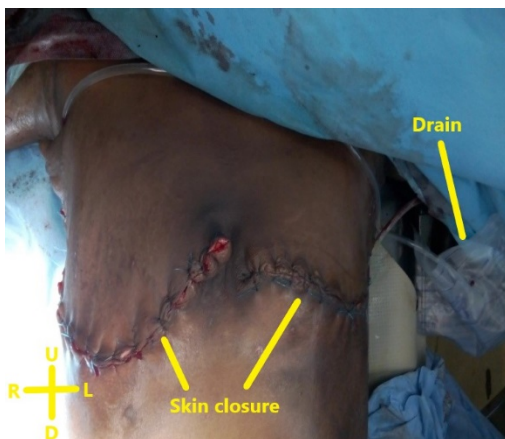


Figure 3: Result after breast reduction