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Gigantomastia of Pregnancy: Complications and Treatment Cases Report at Togo

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Abstract

Introduction: Gigantomastia in pregnancy is a rare pathology that is often physically and psychologically complicated.

Observation: We report two cases, the first of which was a 24-year-old primigravida at 24 weeks amenorrhea, presenting with bilateral gigantomastia progressing from the beginning of her pregnancy and complicated by a large hemorrhagic ulcerative necrotizing skin lesion.

The second case was that of a second pregnant patient, primiparous 29-year-old with a 27-week amenorrhea pregnancy. She had consulted for an exaggerated augmentation and inflammation of both breasts with collateral venous circulation on the chest. They had hyperprolactinemia and glandular hypertrophy. Treatment was symptomatic and the evolution was spontaneously favorable in the postpartum period.

Conclusion: Gigantomastia in pregnancy has hormonal origin. It often becomes complicated towards the end of the second trimester of pregnancy by trophic skin disorders, and may regress spontaneously in the postpartum.

Keywords: Complication; Gigantomastia; Pregnancy; Spontaneous regression; Togo

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Introduction

Gigantomastia in pregnancy is an excessive and disabling growth of the breasts during or at the end of pregnancy [1]. It can be uni or bilateral [1-3]. It is a rare condition with an incidence of 1/100,000 to 1/30000 pregnancies [3]. We report two cases of gigantomastia in the second trimester of pregnancy treated in the Gynecology Department of the Kara University Hospital Center, Togo.

Case Reports

Case 1

The first patient was a 24-year-old primigravida with a 24-week amenorrhea pregnancy. In her gynaecological history, she had her menarche at the age of 17 with regular cycles and never had contraception. There was no family history of breast or other tumour pathology. The patient had presented early in pregnancy with a rapidly progressive bilateral painful increase in breast volume. Two months later, ulcer-hemorrhagic trophic skin lesions appeared. On admission, the patient had a good general condition, a normal temperature, and stable hemodynamic parameters. On examination, the two breasts were more or less symmetrical, very voluminous with shiny skin, generalized induration and inflammation. On the right, there was a skin ulceration of about 10 cm long axis in the inferior-lateral quadrant extending to the right nipple, and on the left an ulceration of about 5 cm long axis in the inferior-lateral quadrant **(Figure 1)**. The patient had no superficial adenopathy. Obstetrical examination was

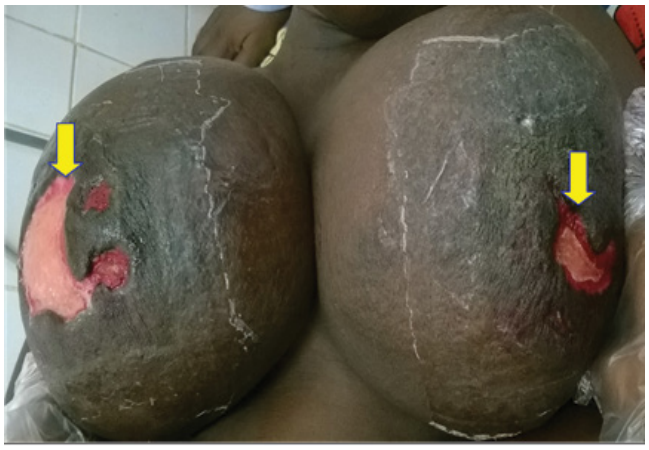

Figure 1 Case 1, with bilateral pregnancia in pregnancy of 25 weeks (Yellow arrow: Skin ulceration)

normal. The paraclinical examination showed anaemia at 5 g/dl, an inflammatory syndrome, hyperprolactinemia at 813 ng/ml, and *Staphylococcus aureus* skin infection. Ultrasonography noted multiple bilateral and symmetrical hypoechogenic tissue masses separated by echogenic septa without purulent collection pockets. Histologically, a benign diffuse hyperplastic dystrophy developed on the lobules and without cellular atypia. Treatment consisted of blood transfusion, antibiotic therapy adapted to the antibiogram and a daily dressing. In addition, the pregnancy was of normal evolution. She delivered naturally after spontaneous labour at 38SA. Breastfeeding was contraindicated. The evolution at six months postpartum was marked by a spontaneous bilateral reduction in breast volume and total disappearance of the skin lesion **(Figure 2)**.

Case 2

The patient was a 29-year-old, second gestational patient, primiparous, whose previous pregnancy and delivery were normal and who had been breastfeeding for two years. She had no specific medical or surgical history. She began menstruating at the age of 14 and had regular cycles; she had never had hormonal contraception. There was no family history of breast disease or other tumor pathology. The onset of the disease was one month earlier by an excessive, abrupt, bilateral breast growthing in an apyretic context. On admission, the patient was in good general condition. The breasts were very tense, swept forward and downward causing the patient to bend, and generating chronic low back pain **(Figure 3)**. In addition, there was a large and very tender tortuous collateral venous circulation from the breasts to the suprathoracic and sternal region. There was no lymphadenopathy. Obstetrical examination was normal. The same results as in the first case were noted on hormonal examination, breast ultrasound and histological examination. Only symptomatic treatment with analgesic type was done. Pregnancy progressed normally with a full-term vaginal delivery. Breastfeeding was then outlawed. The evolution was spontaneously favorable at eight months postpartum with a considerable reduction in the volume of both breasts.

Discussion

Epidemiology

Gigantomastia in pregnancy is a rare condition that usually occurs in Caucasian women. In the literature review, 115 cases of gigantomastia were reported by Dancey et al. [4] including 41 cases of gigantomastia in pregnancy (35.65%). In the African studies, we found only four reported cases, including three cases in Senegal and one in Morocco [1-5].

Etiopathogeny

It's still unclear. It is very often described in circumstances related to hormonal, particularly estrogenic inflation. These are essentially pregnancy and puberty [1]. During pregnancy, the hormonal origin has been raised by several authors. It is linked to an exaggeration of the physiological hyperplastic phenomena of

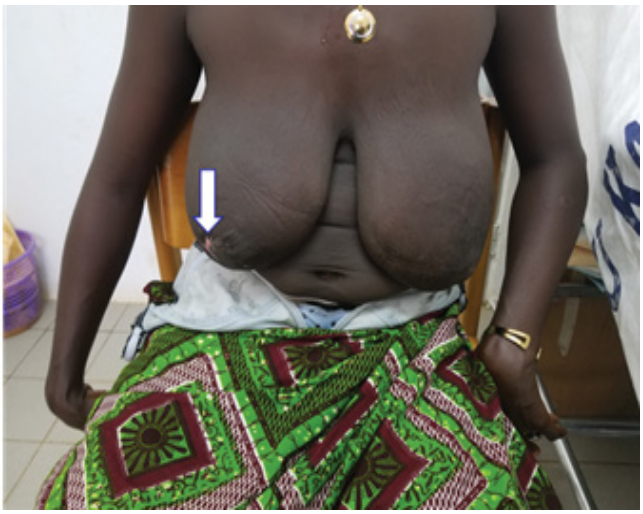

Figure 2 Case 1 with normal breasts 6 months after childbirth (White arrow: Scar from ulceration).

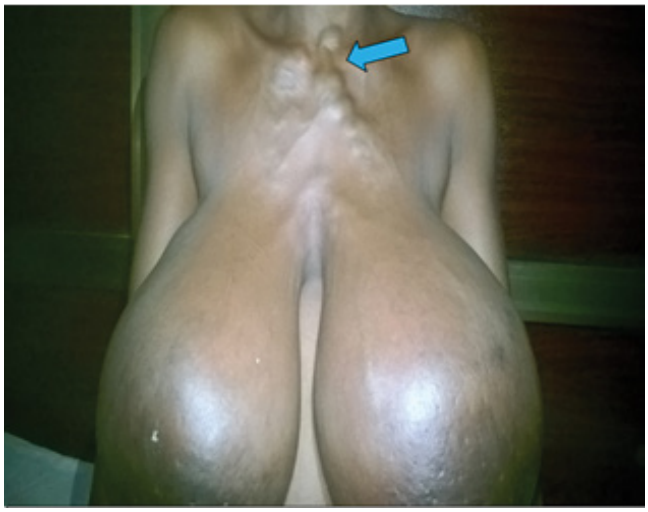

Figure 3 Case 2 with bilateral gigantomastia in pregnancy of 27 weeks (Blue arrow: Thoracic varicose vein).

pregnancy linked to an increase in oestrogen and/or progesterone receptors [1]. Others refer to the role of hyperprolactinemia [3,5] as we found in our two cases. Sometimes it can be iatrogenic, autoimmune, idiopathic or secondary to a pre-existing benign breast disease [6]. Thus, a case of gigantomastia in a woman with a biological autoimmune syndrome discovered on an isolated Raynaud's syndrome at normal capillaroscopy and a case of rapid evolution of a pre-existing hamartoma are reported in the literature [2,6].

Diagnosis

This condition affects young women of childbearing age. Dancey et al reported a median age of 18 years with extremes of 10 and 58 years [4]. Our patients were 24 and 26 years old. In most cases, gigantomastia in pregnancy mainly concerns multiparous women who have had previous pregnancies with normal breastfeeding [1-3,6]. The pathophysiological hypothesis would be the growth of a pre-existing benign lesion secondary to apoptosis mechanisms after the first pregnancy and changes in stroma and hormonal responsiveness related to previous prolonged breastfeeding [2]. However, primigravidae are not spared. This is the case of our study and that of Sidy et al. in Senegal [3], where the pathology is reported in primigravidae. Gigantomastia in pregnancy is characterized by rapidly progressive inflammatory mastitis, often with intense pain due to exaggerated breast tension, occurring towards the end of the first trimester as reported in our study [1-3,6]. It is often bilateral unless there is a previous benign tumor that developed rapidly during pregnancy [1-6]. The most common complications are skin ulcerations and/or infections, local vascular pathologies such as thrombosis or vascular insufficiency leading to tumour infarction, and haemorrhage secondary to hypervascularisation. Statural problems such as scoliosis, kyphosis and lordosis are also described, which can lead to chronic neuralgia or even functional impotence [1-7]. This review of the literature is consistent with the observations of our study. Indeed, our first patient had a hemorrhagic skin ulceration superinfected with Staphylococcus and severe anemia at 5 g/dl. The second patient had large painful thoracic varicose veins and chronic low back pain. A risk of intrauterine growth restriction has also been described in the literature [4]; a complication not reported in most articles or in our observation. Medical imaging is not very contributive [8]. During pregnancy, mammography is not indicated because of the density of the breast and the risk of fetal irradiation [1]. Ultrasound can visualize glandular hypertrophy associated with cutaneous and subcutaneous edematous infiltration and can eliminate suspicious underlying breast lesions.

Hormonal testing shows a variable increase in prolactinemia not related to a pituitary anomaly [3]. This was the case in our two patients where prolactinemia was significant. Histology is characterized by florid pluristratified epithelial hyperplasia with papillary structures, without atypia. The epithelial cells present a vacuole-rich cytoplasm reflecting significant secretory activity. The connective stroma is hypertrophy with edema, sclerosis and necrosis [1,5]. In addition, bilateral gigantomastia secondary to lymphoblastic lymphoma was seen in a pregnant woman [1].

Treatment

Treatment is not well codified and depends on the team, the term, the prognosis of the pregnancy, the breast trophic disorders, and the desire for a later pregnancy [1,3]. In the first trimester, some authors propose a therapeutic abortion followed by breast surgery. Beyond the first trimester, hygienic treatments associated with breast bandages and analgesics are instituted before extraction at fetal maturity [9]. Hormonal treatment with Bromocriptine can be used, but without a considerable decrease in breast volume [3,10]. The lack of significant regression with Bromocriptine has led to the surgical options of mastectomy and breast reduction [1,3]. Some authors believe that surgery is the treatment of choice [1]. Mastectomy would be the most logical, rapid and would expose limited blood loss [9,11] Breast reduction is more aesthetic, but exposes to the risk of recurrence during subsequent pregnancies. This risk of recurrence is almost absolute [12].

In our department, we had recommended symptomatic treatment with dressings, antibiotics for skin infection, blood transfusion for anemia and analgesics. Delivery was spontaneous at term and vaginal in both cases. Breastfeeding was prohibited. The evolution was favorable in both patients with a considerable reduction in breast volume at 6 months and 8 months postpartum.

Conclusion

Gigantomastia is a very rare condition. It can be juvenile, in pregnancy, autoimmune, iatrogenic or idiopathic. During pregnancy, the etiopathogeny is thought to be hormonal in origin. It appears towards the end of the first trimester by a rapid and exaggerated breast enlargement. It is often complicated towards the end of the second trimester by skin, vascular lesions and statural posture disorder. Treatment is usually surgical, but an expectant attitude may be an advantageous, non-expensive option without jeopardizing maternal and fetal vital prognosis. Further similar studies would be desirable to strengthen our observation.

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