Case Report ISSN 2835-6276

American Journal of Medical and Clinical Research & Reviews

Bilateral gravidic gigantomastia: a case report

G.Bassir, I.Maali, A.Gotni, A.Assal, M.Bensouda , M.Jalal, A.Lamrissi, N.Samouh

Hospital Mother Child Abderrahim HA-ROUCHI, Casablanca, Morocco

*Correspondence: I.Maali

Received: 27 Dec 2024; Accepted: 30 Jan 2025; Published: 05 Mar 2025

Citation: Maali I. Bilateral gravidic gigantomastia: a case report. AJMCRR. 2025; 4(3): 1-4.

INTRODUCTION

Gravidic gigantomastia is a pathological breast hypertrophy resulting from the abnormal evolution of the usual epithelial hyperplasia that occurs during or after pregnancy. This pathology presents etiopathogenic challenges, as several hypotheses suggest a hormonal origin. The lesion is characterized by diffuse hyperplastic dystrophy, which is difficult to distinguish from other proliferative breast lesions. This is a study reporting a case of bilateral gravidic gigantomastia with the aim of discussing the physiopathological mechanisms, etiopathogenic aspects, diagnostic features, and therapeutic strategies.

OBSERVATION

Mrs. N.Z., 34 years old, menarche at 16 years, III pregnancy, II deliveries, with a medical-surgical history of goiter under treatment for 3 years, and operated on for a breast cyst in 2016 (anatomopathological examination without malignancy), was examined on August 26, 2024, for bilateral breast swelling during an intrauterine pregnancy of 7 weeks and 6 days.

The onset of her condition occurred one month prior to her admission, marked by the appearance of bilateral inflammatory breast swelling.

The clinical examination revealed hypertrophied breasts with significant collateral venous circulation and an orange peel phenomenon. The skin was tense, shiny, violet-colored, and appeared ecchymotic (Fig. 1).

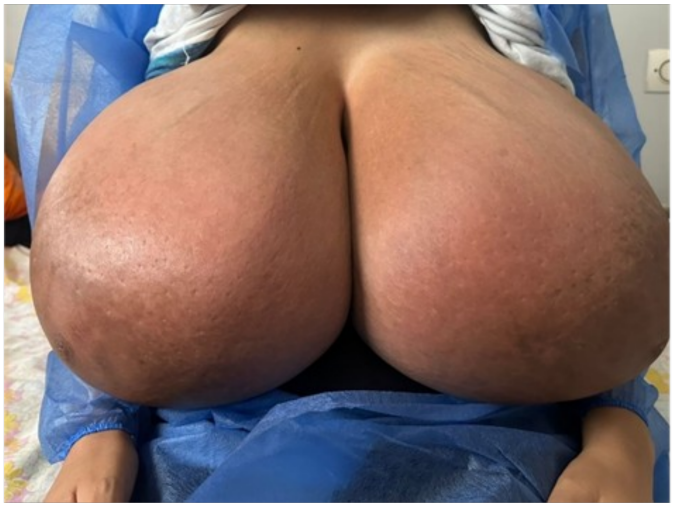

Figure 1 Bilateral gigantomastia

The breast ultrasound showed: significant diffuse echogenic infiltration of both breasts, with some unorganized liquid areas, multiple microcysts, and some well-defined, oval, iso-echoic formations, some of which were multilobulated, and one with a calcified wall, peripheral vascularization seen on color Doppler, possibly related to fibroadenomas.

There was no significant axillary lymphadenopathy.

Hormone levels showed hyperprolactinemia at 149 ng/ml,

The pregnancy progressed to spontaneous abortion.

Painful bilateral exuberant breast swelling occurred in a pregnant patient with hyperprolactinemia. The patient received breast bandages and analgesics. She also received bromocriptine without clinical improvement of the gigantomastia.

DISCUSSION

Gigantomastia is an exuberant breast hypertrophy, with a volume exceeding 1500 cm^3. Moderate hypertrophy is common during pregnancy; however, significant breast hypertrophy is rare. It causes pathological and therapeutic issues due to these very painful breast deformities.

The pathophysiology remains highly debated. The most important factor seems to be a hormonal imbalance. The increase in estrogen and/or progesterone receptors has been implicated. Noczinska et al. [2] found a high rate of estrogen receptors in their study, while this hypothesis was not supported by Lafrenière et al. [1].

Gigantomastia most commonly occurs in multiparous women with no particular medical history and who did not experience any pathology during previous pregnancies. It appears at the end of the first trimester of pregnancy. No specific factor has been definitively identified.

Gravidic gigantomastia is rare, and its frequency is poorly evaluated. Lewinson et al. [4] report two cases among 56,794 births, Zagar et al. [3] report 1 case in 10,000 pregnancies, while Agarval et al. [6] find 1 case in 28,000 to 1 in 100,000 pregnancies.

The clinical presentation is typical: the breasts are tense, painful, and rapidly increase in volume, resembling an inflammatory mastitis.

Gravidic gigantomastia is most often bilateral and rarely unilateral [5].

It is a poorly explored pathology due to its rarity. Imaging is not particularly important in the diagnosis since the breasts appear very dense.

Histological examination confirms the diagnosis and shows diffuse, benign hyperplastic dystrophy, especially affecting the lobules. There is proliferation and dilation of the alveoli of intermediate ducts. The palliative connective tissue hypertrophies with edema, fibrosis, and necrosis. Epithelial cells show cytoplasm rich in vacuoles, reflecting secretory activity. There are no cellular atypias.

This rare anatomical pathological entity is characterized by connective hypertrophy associated with epithelial hyperplasia: on a sclerotic, sparsely cellular tissue, the galactophorous ducts appear dilated and tortuous, lined with florid, stratified epithelium, often consisting of small intraductal papilliform clusters. The absence of a clear capsule allows the elimination of fibroadenoma and phyllodes tumor.

Hormonal assays are generally normal [5]. However, some authors have noted transient hyperprolactinemia [1]. The increase in prolactinemia in our patient supports this argument.

Major complications may arise, including trophic disorders, skin ulceration, and necrosis, as seen in

our patient.

Pseudo-hyperparathyroidism syndromes associated with the progression of gigantomastia and regressing after mastectomy have been described [8].

There is controversy regarding therapeutic modalities since the factors leading to the condition are not well understood. Medical treatment focuses on breast support with bandages, disinfection of inframammary folds and ulcerations, blood transfusions in cases of anemia, and the use of anti-inflammatory drugs in the presence of inflammation. These treatments are generally ineffective. Hormonal treatments using testosterone, progesterone, stilbestrol, and hydrocortisone have been employed, but without success [7—12]. Bromocriptine produced a partial response in some cases [11], but it did not result in any clinical improvement in our patient. Some authors argue that these treatments should not be overly recommended because their effectiveness is not conclusively proven, and they may have teratogenic effects [1].

Therapeutic abortion has been indicated because it causes regression of gigantomastia [14]. However, the spontaneous abortion in our patient did not lead to regression. Moreover, therapeutic abortion raises ethical issues [1].

The treatment of choice is surgery, with indications depending on the presence of complications, breast volume, pregnancy duration, and degree of incapacity. There is no consensus on surgery. Breast reduction should be followed by hormonal treatment, as recurrence during pregnancy is possible. Subcutaneous mastectomy would be incomplete and insufficient for large breasts. Simple mastectomy is the treatment of choice.

Depending on the stage of pregnancy, authors suggest a therapeutic abortion in the first trimester, followed by simple mastectomy. In the second and third trimesters, hygienic treatments, breast bandages, and analgesics should be used. A cesarean section should be performed as soon as the fetus reaches maturity. After delivery, breast reduction surgery can be considered, but subcutaneous or total mastectomy is often the last resort. After surgical treatment, a period of two years before a subsequent pregnancy is recommended [13].

CONCLUSION

Gravidic gigantomastia is a rare pathology whose etiology remains highly controversial to this day. Medical treatment is largely ineffective. The frequent recurrences after surgical breast reductions justify the indications for mastectomy. Its management requires close collaboration between the obstetrician, surgeon, pathologist, and psychologist to provide adequate treatment.

References

1. Lafrenière R, Temple W, Ketchman A. Gestationnal macromas- tia. Am J Surg 1984;148:413—8.
2. Noczinska A, Wasikova R, Myczkowski T. Hypersensitivity of estrogen receptors as a cause of gigantomasty in two girls. Pol Merkur Lekarski 2001;11:507—9.
3. Zargar AH, Laway BA, Massodi SR, Chowdri NS, Bashir MI, Wani AI. Unilateral gestationnal macromastia an unusual presenta- tion of a rare disorder. Postgrade Med J 1999;75:101—4.
4. Lewinson EF, Jones GS, Trimbe FH, Da Costa LM. Gigan- tomastia complicating pregnancy. Surg Gynecol Obstet 1960;110:215—23.

5. Skaane S, Skjeunald A, Solberg A. Unilateral breast hyperpla- sia in pregnancy simulating neoplasm. Br J Radiol 1987;60: 407—9.
6. Agarval N, Kriplani A, Gupta A, Bhaha. Management of gigan- tomastia complicating pregnancy. A case report. S Reprod Med 2002;47:871—4.
7. Blaydes RM, Kinnebrew CA. Massive breast hyperpla- sia complicating pregnancy. Obstet Gynecol 1958;12: 601—.
8. Van Bogaert LJ. Glande mammaire : développement embryon- naire et fœtal, anatomie et microanatomie. Rev Fr Gynecol Obstet 1984;79:159—67.
9. Ramsden CH. An interesting case of mammary gigantism. Br J Plast Surg 1963;16:177—9
10. Nolan JJ. Gigantomastia: report of a case. Obstet Gynecol 1962;19:526—9.
11. Hedberg K, Karlson K, Lindstedt G. Gigantomastia during pre- gnancy: effect of dopamine agonist. Am J Obstet Gynecol 1979;133:928—31.
12. Sarda AK, Kulshresha VN, Bhalla SA, Sing I, Chaturvedi UK. Macromastia of pregnancy: a unique presentation of this rare clinicohistopathological entity. Indian J Plastic Surg 2004;37.
13. Chargui R, Houimli S, Damak T, Khomsi F, Ben Hasouna J, Gamoudi A, et al. Relapse of gigantomastia after mammo- plasty. Report of a case and literature review. Ann Chir 2005;130:181—5.
14. Bhattacharaya P. Pregnancy with huge bilateral hypertrophy axillary tail of the breast. Case report. Br J Obstet Gynaecol 1983;90:874—5.