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Case Report

Unilateral Gestational Gigantomastia- A Diagnosis on Clinical Ground

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Abstract

Gestational gigantomastia is a clinical condition characterized by massive enlargement of one or two breast in a pregnant woman that begin even at the early stage of gestation with associated psychological, social and physical consequence. It is an uncommon clinical scenario, there are less than 200 reported cases worldwide. Its of unknown cause and there are fewer cases of unilateral Gestational gigantomastia which was first reported two decades ago. Although hormonal and autoimmune causes has been proposed but yet to be accepted. The management ranges from conservative care where there is no outright complication to extreme of doing mastectomy. In this case presentation, we report a 15 years old primigravida at 35-week gestational age with right breast gestational gigantomastia and review the diagnosis and treatment of this rare disease in accordance with the earlier literature.

Keywords: *Breast; Gigantomastia; Primigravida*

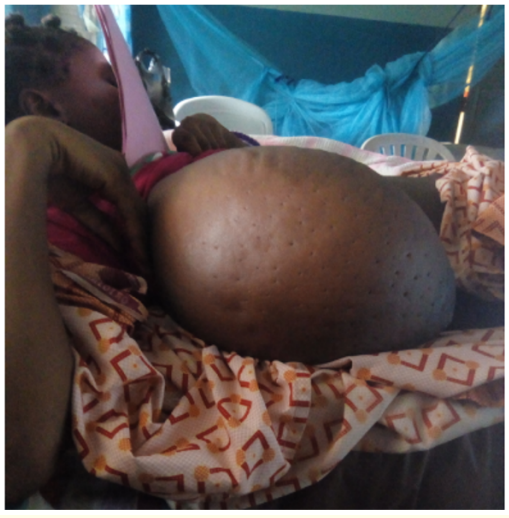
Introduction

Gigantomastia is a clinical condition where breast grow massively to the tune of about 1500 gm or more which sometimes require surgical excision of part of the tissue during pregnancy [1]. It is a rare condition with prevalence of 1 out of every 100,000 gestation [2].

Case Presentation

A 15 year old primigravidal who is in normal usual state of health presented on account of right breast swelling of about eight months duration at gestational age of 35 weeks. However, the second breast is of normal size. Patient has initially presented to general surgeon where she was found to have been pregnant following laboratory investigation. The patient has no history of breast swelling in the past, no swelling in any other part of the body, no ulceration in the affected breast no weight loss, no history of trauma, fever, loss of appetite, no history suggestive of exposure to TB, nor use of contraceptive, however there was occasional milky discharge. Patient noticed breast enlarge with no knowledge that she was pregnant. There was no family history of a similar condition. She has tried a lot of local concoction with no success. The pregnancy has been seamless. She attained menarche at age 14 with regular menstrual cycle of 28 day and 3 days menstrual flow. On general examination, patient is found to be pale and extreme growth of the right breasts with normal skin but the pregnancy is not obvious (Figure 1 and 2). BP was 110/70, PR 82 bpm, height of fundus was 32cm, and the patient is a young teenager with small body size between 35 kg to 45 kg. Breast measures about 38 cm in length (base to nipple) and circumferentially measuring about 64cm calculated volume of 5895 cm^3 and weight of about 5 kg and about 12.5% of the patient estimated weight. Patient could not do much of laboratory investigation on account of financial constraints. The PCV was 18% and she was transfused with two pints of blood

and discharged on double dose hematinic at post transfusion PCV of 24%. Patient was on follow up antenatal visit and presented in labor room at about an amount after initial presentation and delivered a live male neonate with birth weight of 2.5 kg and was discharge after establishing lactation in both breast and no complication reported as at the time this paper is written (2 months postpartum). The decision to presenting this case report was made after receiving written and oral consent from our patient.



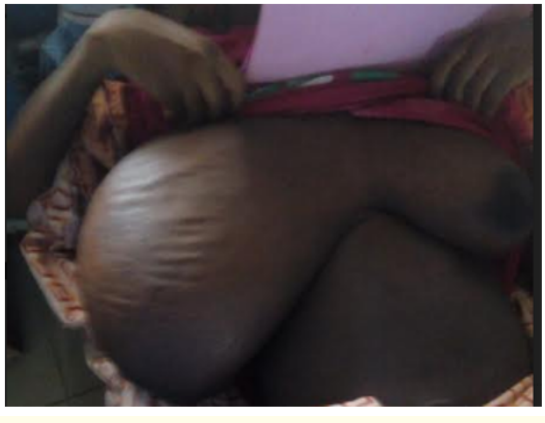


Figure 1 and 2: *Different views of the patient with unilateral Gestational gigantomastia.*

Discussion and Conclusion

Palmuth in 1648 first pointed out Gestational gigantomastia. The cause and courses of the diseases is still poorly understood but surveillance has been placed on pregnancy related hormones [11]. Unilateral cases are fewer than the bilateral which was first reported in the year 1999 by Zargar This massive increment in the breast size are mostly found in the first trimester which correlate highest quantity of gonadotropin production and prolactin has been held as the major cause but other hormone like progesterone, estrogen, thyroxine, growth hormone, cortisol, insulin and human placental lactogen are also being investigated [3,4] However systemically active substance is expected to act on the two breast equally or to some degree in the second breast but this was not the case in this patient where only one

breast is being affected. There was no ulceration nor skin change nor pain the breast which suggested a match in rate of breast growth and tissue vascularization.

Lafreniere., *et al*. 1984 found an increased prolactin levels in the patient in their study but prolactin level was not measured in this case and no inciting factor could be pointed out but patient was found to be anaemic which could be due to poor nutritional status compounded by the pathology [5]. A patient with rheumatoid arthritis using D-penicillamine has been seen to develop it and other assumed etiological substance are cyclosporine and bucillamin [12]. Moreover, Touraine., *et al.* is of opinion that it an autoimmune disease, based on the fact that breast is mostly affected by most autoimmune diseases such as myasthenia gravis, chronic arthritis and Hashimoto's thyroiditis, and immunohistochemically reports of breast tissues [6].

The diagnosis of gestational gigantomastia is by histology, Swelstad., *et al*. discovered significant lobular hypertrophy, ductal proliferation and periductal fibrosis which exclude it from other causes of massive breast enlargement [7]. Clinical history and simple pregnancy test in resource poor environment is of importance as in the present case where patient was not aware she was pregnant but only noticed breast enlargement.

It has been said that the development of the disease is never a factor of number of pregnancy as in the case of this patient who a primigravida, although most cases has been reported in multiparous women [8,9]. Asides the psychological and social impact of the disease, patient is otherwise normal.

The patient and relative was given psychological support and was conservatively managed till delivery, although patient was anemic at the third trimester and was transfused with two pints of blood before discharged. A month after, patient delivered and established normal lactation. Conservative management is encouraged when the no obvious discomfort or damage caused by the breast to allow smooth delivery and breast feeding. This will reduce cost and morbidity associated with the reconstructive surgery. Also use of medication should be discourage based on the fact that this appears to be overblown physiological response and the drugs may affect the baby. The use of bromocriptine, a dopaminergic receptor agonist stop the breast growth, it has no apparent effect on reducing breast size [10]. Tamoxifen, hydrocortisone, diuretics and medroxyprogesterone are as been said to be used for the treatment [11].

In conclusion the unilateral nature of this patient gigantomastia put a question mark on proposed mechanism of etiology of the disease as being hormonally induced but more in support of autoimmune cause but non availability of resources has hampered the necessary investigation. Conservative and symptomatic management is the hallmark. Patient and relatives should be reassured, this is advised where there no complications like ulcer and difficulty in breathing.

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Conflict of Interest

There is no conflict of interest in this work.

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