

## CASE REPORT

### Unilateral gestational macromastia- a rare disorder

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#### Abstract

Macromastia is the massive enlargement of the breast, unilateral or bilateral, disproportionate to the growth of the rest of the body. It is called gravid macromastia or gigantomastia of pregnancy when it occurs during pregnancy. It may or may not regress following parturition. Gestational macromastia is exceptionally rare. We report a 28-year-old female with gigantomastia of the left breast. She presented at four months post-partum with painful massive enlargement of the left breast since the third month of pregnancy. The overlying skin was stretched out and showed multiple ulcers with foul smelling discharge. The nipple and areola were unremarkable. Simple mastectomy was done, as fine needle aspiration cytology was suggestive of phylloides tumour. The breast specimen measured 30 x 30 x 9 cm and was replaced totally by grey-white tissue involving all the resection margins. No normal breast tissue or fat was identified. Histopathology showed periductal as well as diffuse fibrosis, adenosis and lactational changes. No features of phylloides tumour or carcinoma were present and it was diagnosed as unilateral gestational macromastia.

*Key words:* Macromastia, Gigantomastia, Gestational.

#### INTRODUCTION

Macromastia is the massive enlargement of one or both breasts, disproportionate to the growth of the rest of the body. The breast rapidly grows to a large size and spontaneous remission is rarely seen.<sup>1</sup> It has also been defined as enlargement of the breast with a weight exceeding 600 grams and causing discomfort.<sup>2</sup> To differentiate macromastia from moderate to minimal breast enlargement, additional criteria include stretching of the overlying skin causing ulceration.<sup>3</sup> Gravid macromastia, also called gigantomastia of pregnancy, is extremely rare and refers to massive enlargement of the breast in pregnancy. It may or may not regress following parturition.<sup>4</sup> We report a 28-year-old female who had gigantomastia of the left breast.

#### CASE REPORT

A 28-year-old post-partum female presented with painful massive enlargement of the left breast for ten months. The swelling started when she was three months pregnant. The swelling progressively increased in size throughout pregnancy causing severe discomfort. It was diagnosed as phylloides tumour on fine needle aspiration cytology at a peripheral hospital and

the patient was then referred to our tertiary centre. On examination, the left breast was massively enlarged and measured 30 x 30 cm. The overlying stretched out skin showed a few ulcers with foul smelling discharge. The nipple and areola were unremarkable. The contralateral breast was normal. There was no associated lymphadenopathy. Her general physical examination was normal. It was her third childbirth and her previous two pregnancies had a normal course. She had no prior history or family history of any breast disease. After informed consent, a simple mastectomy was performed based on the prior FNA diagnosis of phylloides tumour. The postoperative course was unremarkable. The patient was healthy and asymptomatic during one year of follow-up and had continued breast-feeding.

#### Pathology

The skin-covered breast tissue removed was firm, fleshy, and lobulated measuring 30 x 30 x 9 cm (Figures 1a and 1b). The overlying skin showed multiple ulcers with discolored margins and ulcer bed covered by slough. Multiple sections from the breast tissue on microscopy showed lactational changes, adenosis, and periductal as well as diffuse fibrosis (Figure 2).

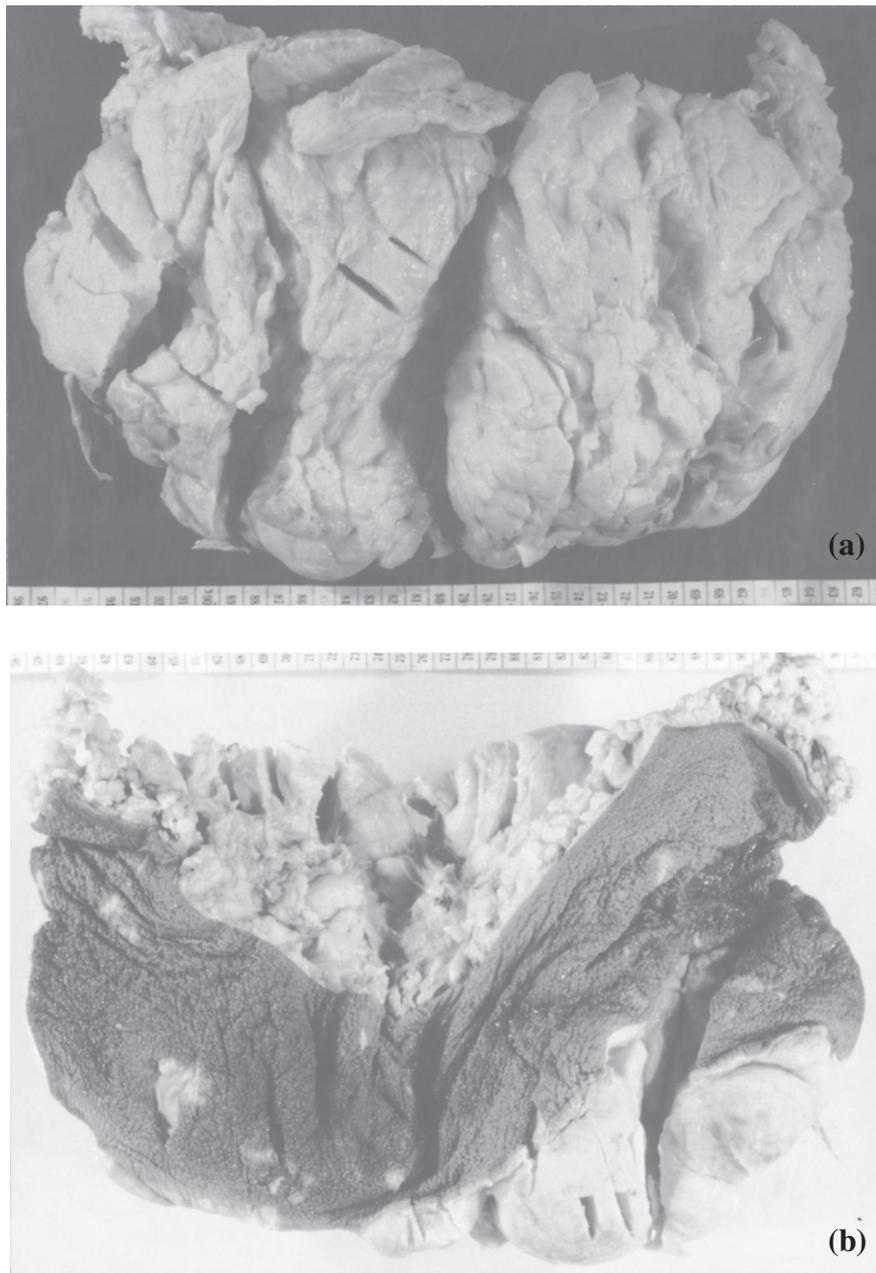


FIG. 1: (a) Gross appearance of the simple mastectomy specimen showing a huge firm, gray-white enlargement of the breast. (b) Overlying skin surface shows multiple ulcers.

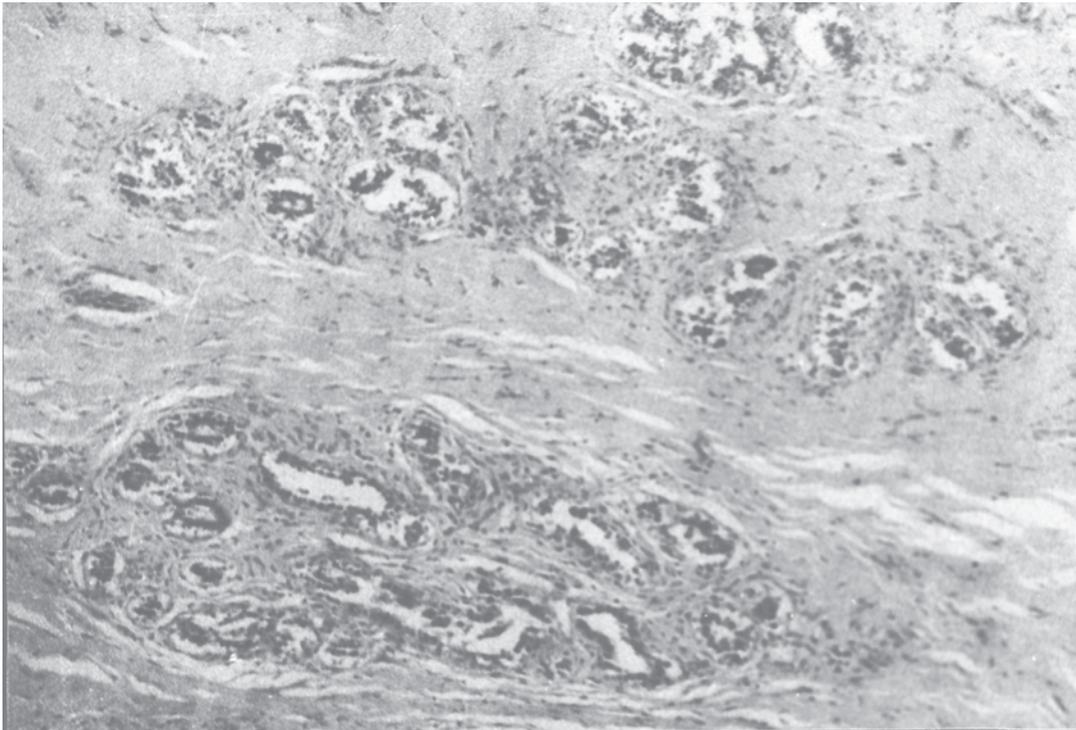


FIG. 2: Histology shows breast acini with lactational changes. There is dense intra- and peri-ductal spindle cell proliferation with collagen deposition. H&E. X250.

Acini showed vacuolated inner epithelium. Some lobules showed eosinophilic secretions in the dilated lumina. No features of abscess, phylloides tumour or carcinoma were present. The final histopathological diagnosis was unilateral gestational macromastia.

#### DISCUSSION

Macromastia is classified into (i) pubertal (virginal hypertrophy), (ii) gestational (gravid macromastia), (iii) in adult women without any obvious cause, (iv) associated with penicillamine therapy, and (v) associated with extreme obesity.<sup>4,5</sup> Of these, gestational macromastia is exceptionally rare.<sup>6,7</sup> Even in a large series of 1064 cases of macromastia, reported by Strombeck, only one was of severe gravid form.<sup>4</sup>

As gestational macromastia appears during a period of marked hormonal influence, it is reasonable to assume that hormones play a significant role in its aetiology. Prolactin, oestrogen and progesterone are produced in the placenta. Gestational macromastia usually begins at the end of the first trimester when an increase in placental steroid production occurs as was observed in our case. Our patient had a unilateral

gigantomastia, which is exceptionally rare.<sup>8</sup> This would suggest that besides hormone levels, local factors such as individual target organ sensitivity too have an important role to play in this condition. Abnormal liver functions as reflected by decreased urinary steroid metabolites have also been demonstrated.<sup>7</sup>

Histopathology suggests that the basic change may be abnormal fluid retention in intralobular connective tissue. There is acinar and periacinar fibrosis in contrast to the normal gravid and lactating breast which has acini with large cylindrical cells and scanty fibrous tissue.<sup>6</sup> The lesion was misdiagnosed as phylloides tumour on fine needle aspiration, probably due to the presence of abundant spindle cells from the fibrous tissue of macromastia.

Studies have documented either some regression or no relief at all following delivery.<sup>9,10</sup> In only one patient, the breasts returned to normal size post partum.<sup>7</sup> Some authors advise conservative management with progestational agents while others advise bilateral mastectomy before morbid complications set in.<sup>7</sup> Our case, however responded well to reduction mammoplasty. She continued to feed her child from her right breast.

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