

# Case Report



## Giant Lactating Adenoma of Breast: A Diagnostic Dilemma

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### Abstract

Lactating adenoma is a benign breast tumour associated with pregnancy. These can be described as tubular adenomas with secretory changes that usually occur during the third trimester and lactation. Lactating adenomas are typically slow-growing, but sometimes the growth can be rapid. We present one such case of a 28-year-old female with a rapidly progressive right breast lump, which she noticed 1.5 years ago.

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### Keywords:

*Lactating adenoma, breast neoplasm, lactation, pregnancy*

## Introduction

Lactating adenoma is an uncommon benign breast lesion [1]. It usually occurs in females of 20-40 years during the third trimester or lactation period [2]. They can be described as tubular adenomas with secretory changes [3]. Lactating adenomas are slow-growing tumors that regress spontaneously [4]. Rarely, it can grow to a large size rapidly, thus causing a diagnostic dilemma. We present one such case of a giant lactating adenoma that grew rapidly and was clinically diagnosed as a phyllodes tumor..

## Case Report

A 28-year-old multiparous female presented with the complaint of a rapidly increasing right breast lump which she noticed 1.5 years ago. Her first child was 2 years old and her second was 1.5 months old. She was breastfeeding. Clinical examination revealed the lump to be 25x20 cm. It had increased rapidly in size. The mass was not tethered to the skin. The nipple areola was normal.

No palpable axillary lymph nodes were present. A clinical diagnosis of Phyllodes Tumor was made.

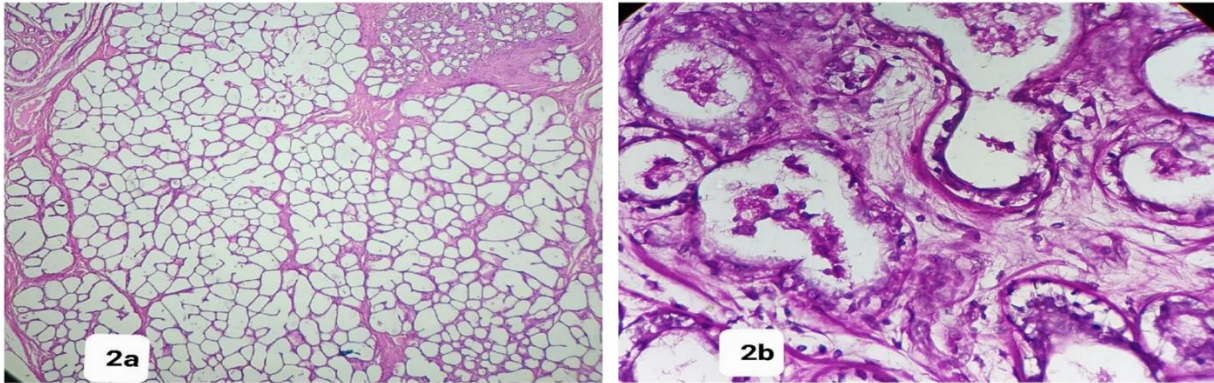
**Gross Examination:** We received a well-encapsulated nodular mass measuring 22x20x15 cm. The external surface was bosselated and glistening grey-brown (Figure 1a). The cut surface was grey-yellow to grey-brown. One area showed a cyst measuring 5x4x3 cm filled with yellowish material (Figure 1b).

**Microscopic Examination:** Extensive sampling was done and multiple sections were taken from various areas. After proper histopathological processing, hematoxylin and eosin-stained slides were studied. Sections showed a well-circumscribed proliferation of hyperplastic closely packed lobules with both epithelial and myoepithelial cell layers separated by thin, delicate connective tissue (Figure 2a). Glands were lined by actively secreting cuboidal cells with small round nuclei and granular to clear vacuolated cytoplasm (Figure 2b). There was no stromal proliferation, which ruled out phyllodes tumour. Areas of necrosis were seen. All the features were in favor of lactating adenoma.

The patient was followed up for six months post-surgery, during which she showed no signs of recurrence of the tumour or any other complications.



**Figure 1:** (a) Gross examination showing a well-circumscribed, lobulated, firm mass measuring 22x20x15 cm. (b) Cut section of the tumor was grey-tan, containing a cyst filled with yellowish material (milk).



**Figure 2:** (a) Sections showing hyperplastic lobules with both epithelial and myoepithelial cell layers separated by thin, delicate connective tissue. (Haematoxylin and Eosin stain; 100x) (b) Section showing glands lined by actively secreting cuboidal cells with small round nuclei and granular to clear vacuolated cytoplasm. No cytological atypia can be seen (Haematoxylin and Eosin stain; 100x).

## Discussion

Lactating adenomas are slow-growing, rare breast lesions mostly seen in the third trimester or during lactation. They are usually small, around 3 cm, and well-circumscribed [5]. However, they may rarely grow rapidly in size, as seen in our case. They are characterized by glands with a tubulo-alveolar architecture and florid secretory features, resembling aggregates of lobules exhibiting secretory hyperplasia. The histologic changes relate to the stage of pregnancy and approximate the changes in the adjacent breast [1]. Necrosis and hemorrhage are uncommon features, occurring in less than 5% of cases [6].

Usually, it is a diagnosis of exclusion, and other breast mass entities must also be considered. Some differentials include fibroadenoma, tubular adenoma, carcinoma, and phyllodes tumour with lactational changes [2]. Our case was peculiar due to its size and rapid growth, giving the primary clinical impression of a phyllodes tumour. Although lactating adenoma and phyllodes tumour with lactational change are difficult to distinguish, a thorough histopathological examination is helpful. The latter will show stromal hypercellularity with epithelial proliferation in a leaf-like pattern. Another diagnosis to consider is lactational changes in pre-existing fibroadenoma. However, such changes tend to be more localized, and the features of fibrous components in the rest of the tumor are still present [7]. It is imperative to rule out malignancy in such rapidly growing giant neoplasms. Breast carcinoma in pregnancy, although uncommon, can be more advanced than in non-pregnant females [3]. Hence, a definitive diagnosis requires the patient's history, physical examination, and histopathological features.

Lactating adenomas usually regress spontaneously, requiring no additional treatment. However, in cases where they increase in size, produce severe pain, or there is a chance of malignancy, surgical excision is needed [2]. In our case, surgical excision was required due to its size and persistent state.

## Conclusion

Hence, all cases of breast lesions that occur during pregnancy or in the lactation phase must be thoroughly investigated, especially those that have an aggressive clinical presentation. Extensive sampling and multiple sections must be studied to completely rule out malignancy.

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**Competing Interest:** *None Declared*

## **References**

1. Manipadam MT, Jacob A, Rajnikanth J. Giant lactating adenoma of the breast. *J Surg Case Rep.* 2010;2010(9):8.
2. Layton C, Melnikau S, Collado-Mesa F, Avisar E. Exceedingly rare lactating adenoma of three-year duration: a case report. *Ann Breast Surg.* 2021.
3. Yu JH, Kim MJ, Cho H, Liu HJ, Han S-J, Ahn T-G. Breast diseases during pregnancy and lactation. *Obstet Gynecol Sci.* 2013;56(3):143–59.
4. Magno S, Terribile D, Franceschini G, Fabbri C, Chiesa F, Di Leone A, et al. Early onset lactating adenoma and the role of breast MRI: a case report. *J Med Case Rep.* 2009;3(1):43.
5. Moulaz IR, de Oliveira FSS, da Silva EC, Machado JM, Santos MCLFS. Giant lactating adenoma. *Autops Case Rep.* 2021;11
6. Ravikanth R, Kamalasekar K. Imaging of lactating adenoma: Differential diagnosis of solid mass lesion in a lactating woman. *J Med Ultrasound.* 2019;27(4):208–10.
7. Baker TP, Lenert JT, Parker J, et al. Lactating adenoma: a diagnosis of exclusion. *Breast J.* 2001;7(5):354-7.