

Original Article

GIANT LACTATING ADENOMA WITH FIBROADENOMA LIKE CHANGES

Dr.Megala Chandrasekar¹, Dr.AnbuLenin Kulandaivel², Dr.R.Thamil Selvi

Ramachandran³, Dr.Kumudhini Priya⁴, Dr.Sangeetha Kandasamy⁵.

¹ Assistant Professor, Department of Pathology, Vinayaka Missions Kirupananda Variyar Medical College and Hospitals, Salem – 636308.

² Associate professor Department of Pathology, Vinayaka Missions Kirupananda Variyar Medical College and Hospitals, Salem – 636308.

³ Head of the department Department of Pathology, Vinayaka Missions Kirupananda Variyar Medical College and Hospitals, Salem – 636308.

⁴ Assistant professor Department of Pathology, Vinayaka Missions Kirupananda Variyar Medical College and Hospitals, Salem – 636308.

⁵ Assistant professor Department of Pathology, Vinayaka Missions Kirupananda Variyar Medical College and Hospitals, Salem – 636308.

ABSTRACT:

Lactating adenomas (LAs) are uncommon benign breast tumors that typically occur in the late pregnancy or lactation period and are among the most prevalent breast lesions during puerperium. They commonly present with a painless, rapidly growing, large, mobile breast lump either late in pregnancy or the postpartum period. Despite being a condition, a core biopsy is almost always required to exclude malignancy.

We are presenting a case of a 20-year-old patient who has progressive increase in size of the pre-existing Left breast lump that has occurred during pregnancy. Due to the massive increase in size in a short period, the lump was removed shortly after delivery with an acceptable cosmetic outcome.

Key words: Lactating Adenoma, Breast Lesions, Fibroadenoma.

Corresponding Author: Dr. Megala Chandrasekar, Assistant Professor, Department of Pathology, Vinayaka Missions Kirupanandha Variyar Medical College and Hospitals, Vinayaka Missions Research Foundation (Deemed to be university), Salem – 636308.

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INTRODUCTION

Lactating adenoma is a rare tumor and there are differing views on its histogenesis. James et al considered lactating adenoma to be a pure and readily recognisable morphological form clearly distinguishable from tubular adenoma and fibroadenoma that is always related to current or recent pregnancy(1). According to them, most tumors diagnosed as lactating adenomas are diagnosed during pregnancy and do not have lactational secretion. The secretory changes seen are

similar to the physiological changes of pregnancy in the adjacent breast tissue. Hence they proposed the name “tumor of pregnancy”. Sometimes it can grow very rapidly into large size and may produce diagnostic dilemma. We herein report the case of 20 -year-old woman with a giant lactating adenoma of 17 cms in diameter.

CASE PRESENTATION

20 year old postpartum women referred by her gynaecologist to the surgery department for evaluation,

presented with huge breast mass that started to grow in the peripartum period and reached size of 17 cms in postpartum. Mass was huge and it appeared to be like accessory breast tissue hanging down from the axilla. The lesion was painless and mobile. USG did not show any signs of malignancy. FNAC was done. Aspirate was scanty and yielded only scattered mononuclear cells. Report was given as ? galactocoele /lactating adenoma. Following this surgery was done and specimen sent for Histopathological evaluation. Initially imprint cytology from the lesion was taken before grossing and features were as in fig 2. Excised mass weighed 1250 gms. On doing grossing, cut section showed varying sized nodules and on cutting each nodule showed gushing of white to yellowish milky secretions. Microscopy showed circumscribed benign tumour composed of cells arranged in closely packed glands. Individual cells are round with abundant granular eosinophilic cytoplasm with round nucleus. Also seen are areas with glandular epithelial component in intracanalicular pattern arranged in fibrous stroma. The impression was given as Giant lactating adenoma with fibroadenomatous change (fig 3,4).

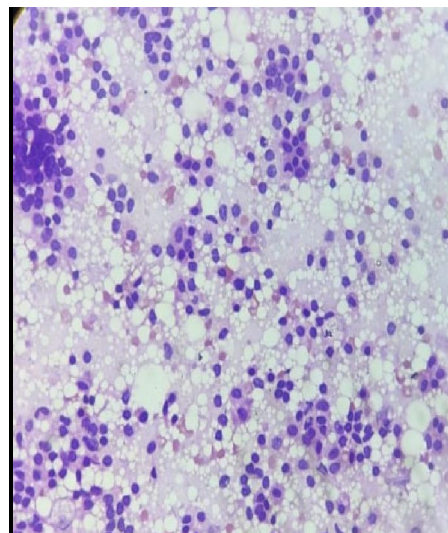


Fig 1:cut section showing gushing of milky secretions from nodules.

Fig 2:Imprint cytology showing scattered mononuclear cells in a eosinophilic granular background.

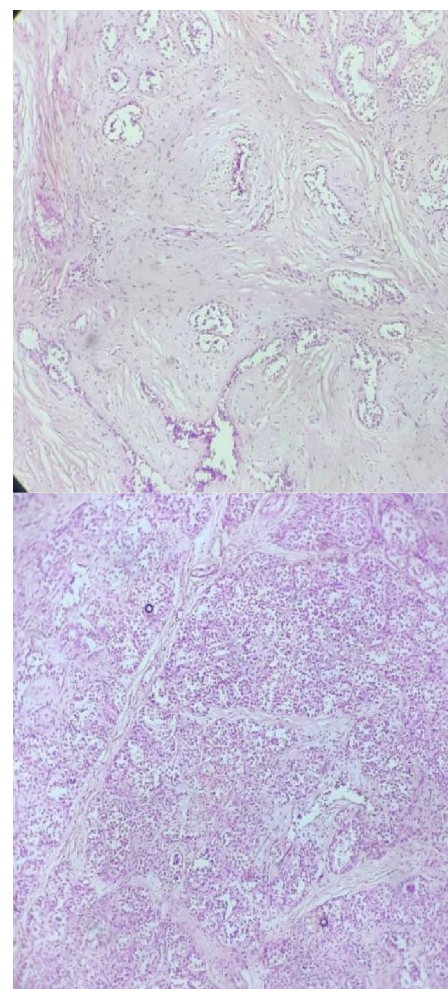


Fig 3:H&E,10X showingfibroadenomatated change

Fig 4:H&E,10x Showing lobules of glandular component.

DISCUSSION

LACTATING ADENOMA so called tumour of pregnancy is a benign epithelial lesion of the breast which typically occurs in late pregnancy. There has been no clear consensus among the pathologists and clinicians on whether LA is considered a distinct condition or as a result of pregnancy-induced changes from pre-existing fibroadenoma, lobular hyperplasia, or tubular adenoma. There are two proposed theories regarding the pathogenesis. One suggests that a lactating adenoma is a de novo lesion specific to pregnancy. It is specifically characterized as a true or pure adenoma, being composed primarily of epithelial cells with only scant stromal components (2). Pure adenomas differ from other so-called adenomatous lesions, including fibroadenomas, which are composed of prominent stromal elements. Our case fits into this theory as lesion has occurred only during the pregnancy and started growing thereafter. This is also supported by Slavin et al, who in a study of 30 cases of nodular breast lesions of pregnancy, described 12 lesions that fitted with the description of lactating adenoma. According to Slavin et al, lactating adenomas are nodules of physiologic lobular proliferation which become more prominent than the adjacent breast tissue and appear clinically to be a distinct mass and histologically resemble focal exaggerated physiological hyperplasia. (2,3)

Another theory is that lactating adenomas may result from adenomatous or lactational transformation of preexisting lesions, such as fibroadenomas, tubular adenomas, or hamartomas, which undergo lactational changes under hormonal influences. In this theory, lactating adenomas are still differentiated from lactating fibroadenomas, which also feature lactational changes but remain a

predominantly stromal lesion and therefore a distinctly different entity. Hertel et al has proposed that lactating adenomas arise in preexisting adenomas.(4) In a study by Hertel et al, five of the seven postpartum patients with tubular adenomas, first observed the lump during pregnancy, leading to the authors' conclusion that tubular adenomas and lactating adenomas are two ends of a spectrum, the latter with secretory changes associated with physiological states of pregnancy. Both the views are given in the latest WHO fascicle on breast tumors, that is to say that a lactating adenoma is considered as a tubular type adenoma that may show extensive secretory changes in the epithelial cells during pregnancy and lactation.(6,7)

Usually, lactating adenomas are slow growing tumors which are smaller than 5cm in size and are well demarcated from the surrounding breast tissue.(6) In a series of 14 lactating adenomas by James et al, most of the tumors were 2.5 – 3.5cm in size. The largest tumor in that series measured 7.8cms. The largest case reported in literature was by Reeves et al. They reported a giant breast mass with a size of 25 X 18cms. (7) The present case measured 17 cms in diameter possibly being second largest.

Sonologically, lactating adenomas are oval, sharply circumscribed, solid hypoechoic mass. Rapid increase in size in a lactating adenoma can be due to infarction. Reeves et al have also described rapid increase in size in their report of giant lactating adenoma. In our case also, there was a history of pain, rapid growth and evidence of infarction. Sometimes, huge size and rapid increase in size can lead to a mistaken clinical diagnosis of malignancy. This is an important point to bear in mind. Histopathological examination easily distinguishes the two.

Pregnancy-related breast changes such as stromal involution, ductal dilatation, and glandular proliferation make the clinical and radiological assessment a

bit challenging [6]. Due to radiation risk and increased breast density during pregnancy, breast USS is considered the primary diagnostic modality for assessing breast lesions during pregnancy and lactation. Yet, mammography and MRI might be required in selected cases. Parnes et al. highlighted that LA possible mammographic findings include a well-defined, lobulated mass with fat density or fluid-fat level [8]. In our case, we did not do a mammogram due to the patient's young age and pregnancy.

Following post partum period she was referred for FNAC. Cytology plays a very important role in identifying lactational adenoma cases. But, In our case it yielded very scanty material only. However cells showed bland morphology and abundant secretions in the background. So, possibility of galactocoele / lactating adenoma was given. Then Surgery was done. Before submitting for histopathology processing, Imprint cytology was attempted. The characteristic cytological findings which helped to clinch the diagnosis included- highly cellular smears, mono-layered cohesive cell clusters with foamy cytology, minimal bipolar cells in the background and granular proteinaceous background. Bland nuclear features, minimal pleomorphism and secretions in the background are the key features which help to clinch the diagnosis.

Lactational adenoma consists of proliferation of epithelial component only compared to fibroadenoma where there is proliferation of both epithelial and stromal elements. Gross examination showed well-circumscribed, multiple lobulated masses, with areas of necrosis; while microscopically, it is seen as well-circumscribed nodules of tightly packed lobular acini lined by cuboidal epithelial cells with markedly vacuolated cytoplasm containing lipid-rich material, hobnail appearance, and eosinophilic secretions, within the acini [9-10]. Also areas of necrosis due to infarction noted and fibroadenoma like changes showing

proliferation of stromal component and epithelial component in intracanalicular pattern in the adjacent areas noted. This may be in accordance with Hertel et al who considers both are two ends of the spectrum in histogenesis.

Lactating adenoma is often a diagnosis of exclusion, after ruling out other benign or malignant causes of a breast mass. It is worth emphasizing that any breast lesion that occurs during lactation should be thoroughly investigated due to the increased risk of carcinomas that metastasize from lactating breasts.

Enucleation is the recommended treatment for lactating adenomas as there is a low risk of recurrence. In our case the hanging mass along with skin is enucleated. Bromocriptine, a dopamine agonist can also be used to shrink the tumor before surgery. Bromocriptine can suppress lactation, the benefits of tumor shrinkage must be weighed against the cessation of lactation in a mother who is breast feeding (11,12).

CONCLUSION

We present a rare case of Giant lactating adenoma which was highly suspicious for malignancy at clinical presentation owing to large size and rapid growth. A LA is a benign tumor that typically occurs during pregnancy or lactation period. Despite limitations of imaging modalities due to pregnancy and pregnancy-related breast changes triple assessment, including Fnac/core biopsy stays the mainstay for diagnosis. FNAC proves itself as an effective tool with minimal surgical intervention in identifying the etiology in majority of breast masses in pregnancy and lactation. The cyto-pathologists must be aware of the characteristic findings which are expected in cytology smears from breast masses in pregnancy and lactation. Secondly, the aspirate smears in pregnancy and lactation must be evaluated with caution in order to avoid over/under diagnosis. Majority of breast masses in pregnancy and lactation are benign. However, the physicians must

be aware of Breast carcinomas which are on rise due to increase in the child bearing age group. It must be kept in the differential diagnosis while evaluating breast lumps in these conditions for timely diagnosis and intervention.

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