

Letter to the Editor

Lactating adenoma with infiltrating ductal carcinoma breast in a pregnant woman

Sir,

Breast cancer diagnosed during pregnancy or 12 months postpartum is referred to as pregnancy associated breast cancer and is reported in 1/3000 pregnancies.^[1] On the other hand lactating adenoma are the most prevalent breast masses seen in pregnant women. Only a few cases in the literature describe patients with lactating adenoma containing an associated infiltrating carcinoma.^[2,3]

A 28 years old woman presented with progressively enlarging mass in her left breast of seven months duration. The patient was pregnant and also lactating a 14 months old child. On palpation the lump was 4 cm in diameter, soft and freely mobile with unremarkable overlying skin and nipple. The lump was not associated with any axillary lymph node enlargement. A fine needle aspiration cytology was advised which showed a few ductal epithelial cells exhibiting apocrine changes and moderate degree of nuclear atypia (atypia was more than that could be explained on the lactational history). Lumpectomy was done, grossly the mass was round, firm, well circumscribed and measured 4.5 × 3 × 3 cm in size. Cut surface was grayish white and showed tiny cystic spaces along with a firm area which gave a gritty feel. Microscopy revealed lobules of variable sizes, characterized by proliferation of benign ducts, separated by sparse

intervening stroma. The ducts were lined by vacuolated secretory cells and few contained eosinophilic secretions within the lumen. [Figure 1] At other foci solid sheets of malignant cells were seen in the stroma which at places formed vaguely tubular and acinar structures. [Figure 2] A diagnosis of lactating adenoma with coexisting invasive ductal carcinoma was made. Immunoreactivity in carcinomatous areas for estrogen and progesterone receptor was lacking; but membranous staining (3+) was seen for c-erbB-2. [Figure 3] The patient was subjected to radiotherapy and chemotherapy after delivery.

Pregnancy associated breast cancer although rare are the most common cancers seen in pregnant women. These tumors are of high grade, have low frequency of hormone receptors, high expression of c-erbB2 and have poor

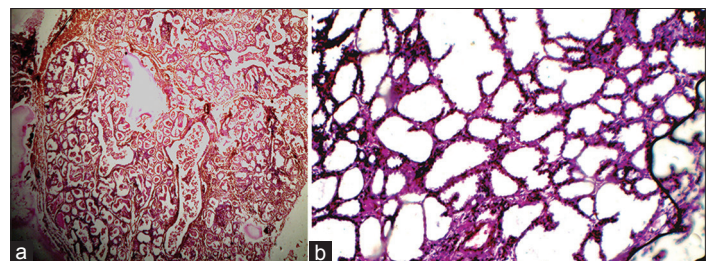


Figure 1: (a) Microphotograph showing lobules of lactating adenoma and showing it to be a circumscribed tumor (×100, Haematoxylin and eosin), (b) (revised) Microphotograph showing lobules of lactating adenomas, lining epithelium showing apocrine change. (×100, Haematoxylin and eosin)

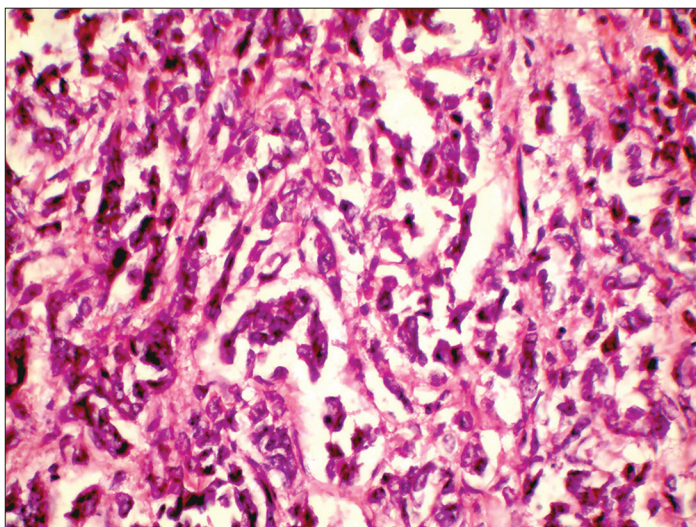


Figure 2: Microphotograph showing carcinomatous areas. (x400, Haematoxylin and eosin)

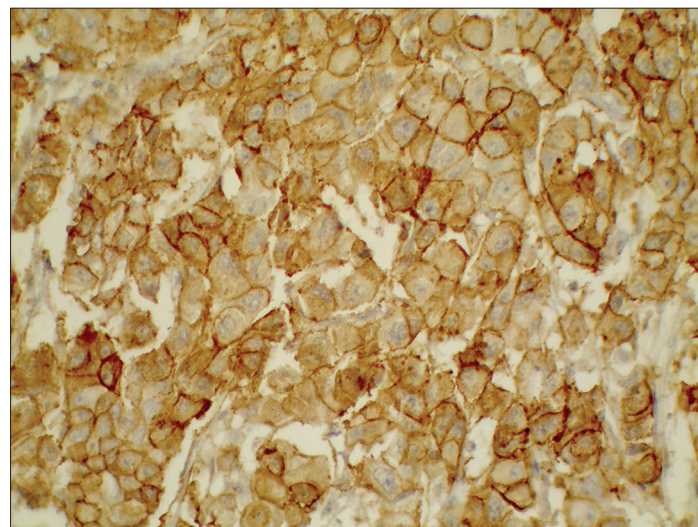


Figure 3: Microphotograph showing membranous staining (3+) for c-erbB2 in carcinomatous areas

prognosis. The patients present in advanced stage of the tumor probably because the symptoms are falsely related to pregnancy associated changes both by the patient as well as the physicians, resulting in delay in treatment.^[1] Moreover radiological diagnosis is also difficult due to lactational changes. Fine-needle aspiration cytology (FNAC) is the initial procedure of choice for evaluating breast masses detected during pregnancy and lactation provided the cytopathologist must be informed that the patient is pregnant or lactating because the physiologic changes of pregnancy and lactation induce proliferation in the normal breast that can be confused with malignant change.^[4] So the diagnosis is not always straight forward and surgical resection may be required for definitive diagnosis and exclusion of other pathologic processes. The treatment is individualized according to circumstances of each case, that include the gestational age in which the cancer was discovered and surgical staging. Patients with stage I and II cancer in the first 6 to 7 months of pregnancy should be treated by modified radical mastectomy (as irradiation is contraindicated) and disease in late pregnancy, are treated by lumpectomy and axillary dissection, with irradiation or chemotherapy being delayed until after delivery. In patients with locally advanced or metastatic cancer diagnosed early in pregnancy, for whom both chemotherapy and radiation therapy would be indicated, consideration must be given to termination of pregnancy. Breast cancer has equivalent prognosis in pregnant and non-pregnant women when matched by age and stage at diagnosis.^[5]

Lactating adenomas are benign lesions and are not thought to be a risk factor for the development of carcinoma. However, there is a report of a lactating adenoma occurring simultaneously with an infiltrative carcinoma with possibility of collision tumor and a case report of an invasive carcinoma developing at the previous site of a lactating adenoma.^[2,3] Lactating adenomas have been shown to express high amounts of the prolactin receptors. It is plausible that the

effects of high concentrations of prolactin and progesterone on an already fully primed breast (as a result of lactation) could initiate carcinogenesis in the lactating adenoma.^[6] Clearly, further experience is necessary to resolve the dilemma and determine its prognostic relevance. Thus it is emphasized that women with lactating adenomas should not be neglected and close follow up should be maintained to rule out coexistent carcinoma, even if the chance is very remote.

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