



Gestational breast cancer: a case report of two cases

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Abstract

The term gestational breast cancer is defined as breast cancer diagnosed during pregnancy and up to 1 year postpartum. Overall incidence rate is 0.7 – 3.8% . These lesions are generally missed on radiology as well as cytology due to physiological and functional changes in mammary gland or misdiagnosed as hyper proliferative change of breast. These may present later in advanced stage of malignancy with axillary lymph node metastasis in 47 to 89 % of cases. Core needle biopsy is a gold standard for it's diagnosis. We hereby report two cases of gestational breast cancer with lymph node metastasis.

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Introduction

Although breast cancer is a high profile disease, its association with pregnancy is less often reported. Where as leukemia and lymphomas are most common in pregnant females breast carcinomas are rare..^[1] Incidence of breast cancer increases with advancing age..^[2]

The term gestational breast (GBC) cancer is defined as breast cancer diagnosed during pregnancy and up to 1 year postpartum..^[1] GBC is likely to become more common as more and more women delay pregnancy when chances of developing breast cancer begins to rise. Overall incidence rate is 0.7-3.8 % of all diagnosed cases of breast cancer. ^[1] On radiology and cytology these lesions are generally missed, underdiagnosed or misinterpreted due to physiological and functional changes in mammary gland or misdiagnosed as hyper proliferative change of breast and present later with advanced stage of malignancy..^[3] Risk of advanced disease is 2.5 % higher in PABC as compared to non-pregnant counter parts..^[4] Core needle biopsy is gold standard for diagnosis with predominant histology type being infiltrating ductal carcinoma..^[5]

The main concern is the decision of continuation vs termination of pregnancy if diagnosed in second trimester and early diagnosis is important. Decision, however should be left to patient's will and therapeutic necessities. Treatment of choice is surgery as radiation should be avoided because of its toxic effects on fetus and chemotherapy is possible only after first trimester.

Case Report

Case I: 34 year lactating female resident of Manipur G₁P₁A₀ with history of delivery 10 months earlier, presented with bilateral breast lumps with for 6 months (fig 1).

Case II: 37 year lactating female resident of Bihar G₂P₂A₀ with history of delivery 6 months earlier presented with palpable lump in right breast for 3 months. (fig 2)

On cytology both cases showed characteristic features of ductal carcinoma NOS type with only an occasional benign cell showing cytoplasmic vacuolization(secretory changes) .(Fig.1D & 2C.)

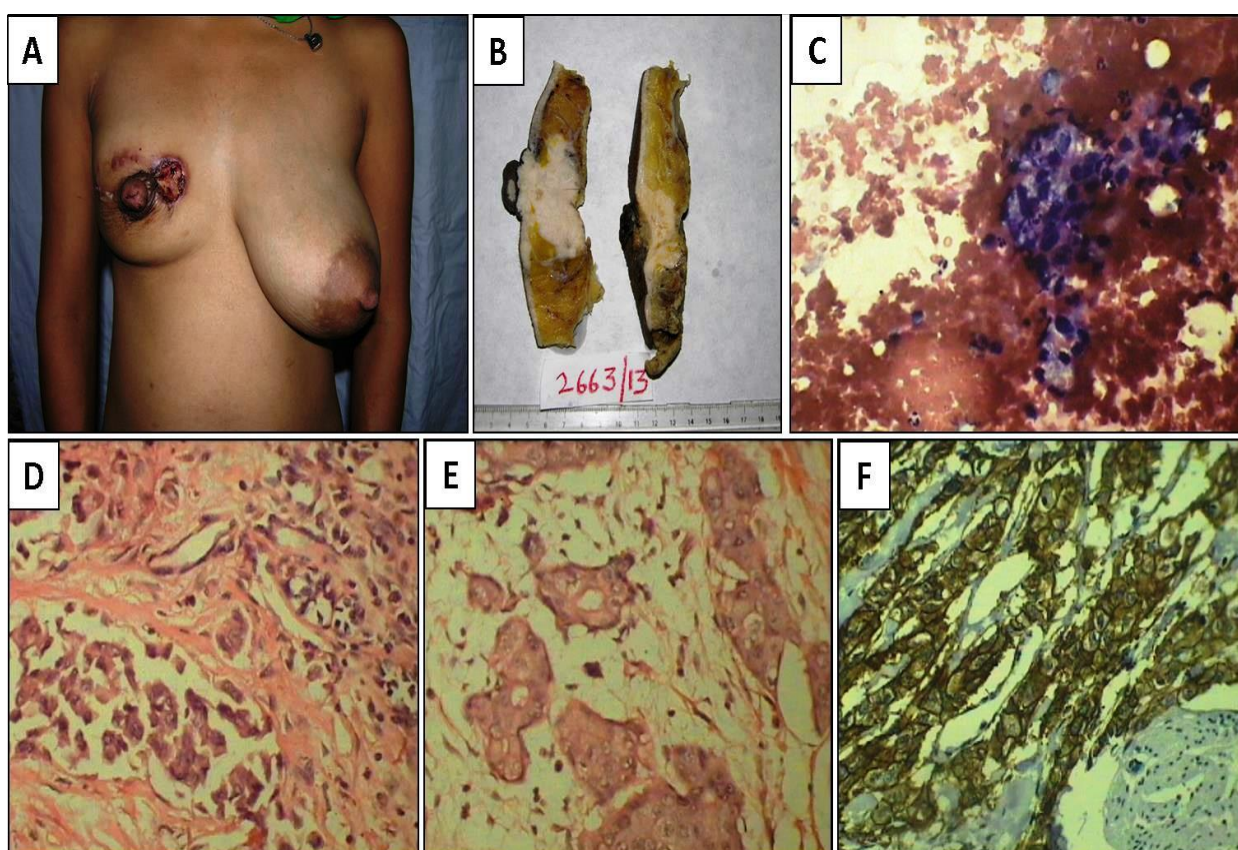


Fig 1 A) clinical image showing bilateral breast masses with ulceration on right sided; B) gross showing tumour involving overlying nipple areola and overlying skin; C) cytology smear showing cluster of malignant cells (giemsa, 40X); D & E) infiltrating ducatal carcinoma NOS type (H&E, 40X); F) microphotograph showing strong Her- 2 membranous positivity (IHC,40X)

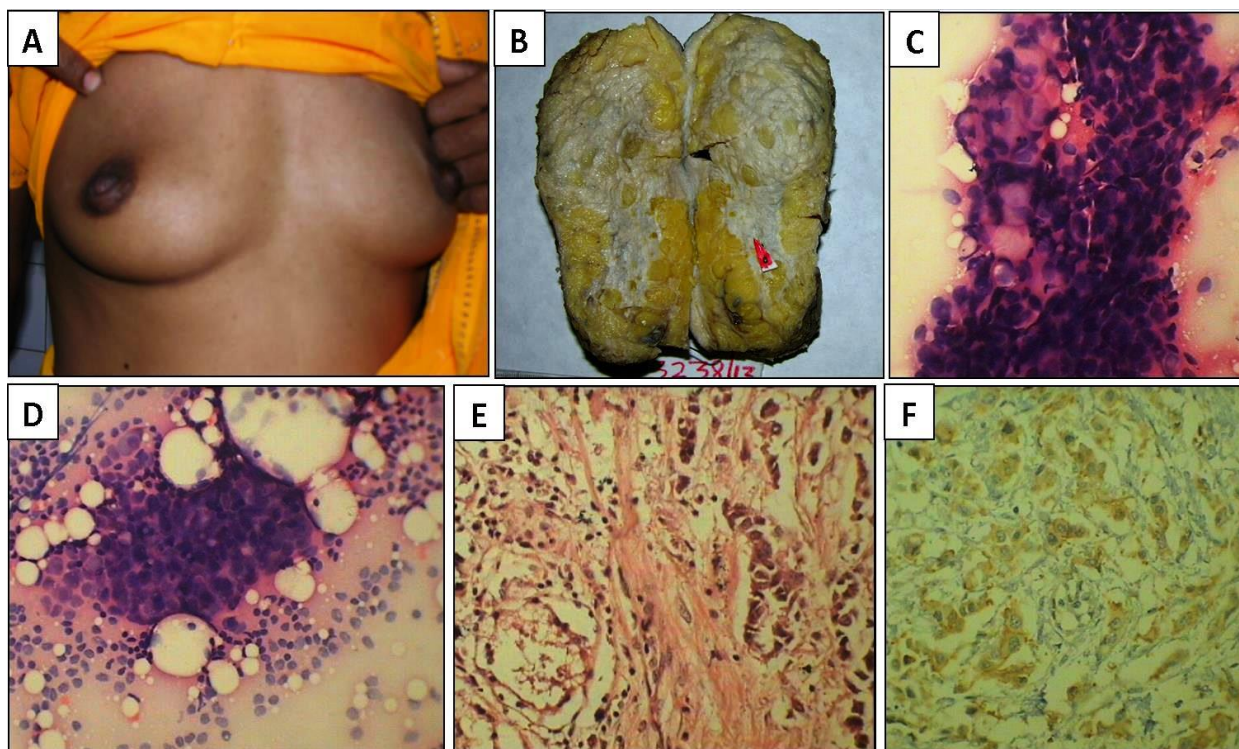


Fig 2 A – clinical image showing lump in right breast; B – gross showing tumor foci with surrounding lactational change; C – cytology smear showing malignant cell with few showing cytoplasmic vacuolisation (giemsa , 100X); D – cytology smear showing malignant cells (giemsa, 40X); E – infiltrating breast carcinoma NOS type (H&E , 40X); F – microphotograph showing weak her- 2 membranous positivity (IHC,40X)

On histological examination in Case 1 the entire right breast right was replaced by tumour with ulceration of overlying skin with right axillary lymph node metastasis. And left breast showed tiny focus of tumour along with lactational hyperplasia with (T4N1MX). (Fig 1 B1&B2)

Case 2 showed tumour in central and lateral quadrant measuring 4x4 cm with axillary lymph node metastasis.(T2N1MX). On microscopy both cases were of infiltrating ductal carcinoma NOS type. (Fig 2.B)

Discussion

The recent updates show that breast cancer is second most common malignancy diagnosed during pregnancy after cervical cancer.^[6] A high index of suspicion is therefore warranted for breast lump in pregnant female. There is disagreement in worldwide literature concerning the influence of pregnancy on incidence and course of breast cancer.

GBC is age related and women who have their first pregnancy after 30 years have two to three times higher risk of developing breast cancer than women who have their first pregnancy before age of 20.^[2] Mean age at diagnosis is 32-34 years.^[2] As more and more women delay pregnancy there is increase in it's incidence. Incidentally the first case was from Manipur where it is common practice to have delayed child bearing.

Case I presented with bilateral masses which are reported in 4.6 % cases.^[7] Most women present with painless mass in breast and sometimes with milk rejection sign.^[2] In both these cases milk rejection sign was absent.

Detection of any breast lump during pregnancy or lactation requires immediate diagnostic procedure and treatment. As the breast size and parenchymal density increases during pregnancy and lactation secondary to hyper estrogenic proliferative changes the corresponding efficacy of mammography in detecting early breast cancer in pregnant women decreases. It is important to stress on regular self-examination in pregnant females.

Pregnancy related hyperplastic changes with atypia may give false positive FNA results.^[2] However in case I neoplastic epithelial cells predominated and cells showing lactational changes were very few..

GBC are generally reported as negative for hormone receptors with higher frequency of lymph node positivity 47 to 89 % .^[8] Case I was ER/PR negative with Her 2 strongly positive (fig 1.D) but in case II Her 2 was weakly positive. (fig 2.E) Both cases had axillary lymph node metastasis. However, prognosis mainly depends on the stage of the disease at the time of diagnosis and criteria are same for lactating women as for non-gestational

women. Both patient were in remission at last follow up one year later.

Conclusion

Both the cases highlight the importance of timely and early detection of breast cancer during routine antenatal and postpartum period, as well as to highlight the relevance of history taking and careful evaluation of the cytologic material.

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Competing Interests

None declared.

References

1. Jaroslaw Jakubik, Leszek Gottwald, Monika Kulkowska, Ewa Gora, Jerzy Korczynski, Andrzej Bienkiewicz, Grazyna Pasz-Walczak, Piotr Pluta, Aleksandra Cialkowska- Rysz . Breast cancer in pregnant women : report of two cases and review of literature. Arch Med Sci 2008 ; 4,2 : 204-207
2. Dawn M Barnes, Lisa A. Newman. Pregnancy Associated Breast Cancer – A literature Review. Surg Clin N Am 87 2007;417-430
3. Goyal P, Sehgal S, Ghosh S, et al., “Histopathological Correlation of Atypical (C3) and Suspicious (C4) Categories in Fine Needle Aspiration Cytology of the Breast,” International Journal of Breast Cancer, vol. 2013, Article ID 965498, 5 pages, 2013. doi:10.1155/2013/965498
4. Moore HC, Foster RS. Breast Cancer and Pregnancy .Semin Oncol 2000;27:646-53.
5. Loibl S, Von Minckwitz G, Gwyn K et al. Breast Cancer During Pregnancy. International recommendation for an expert meeting. Cancer 2006;106:237-46.
6. Mamoh Tobe, Carryl Stephen, kondamudi Vasantha, Abraham Shirley, Rimpel Bernard, Xiao Philip, Guevara Elizabeth. Breast Cancer In Pregnancy : Case Report. Pan African Medical Journal 2010 ;5:3
7. Clark RM, Reid J. carcinoma of breast in pregnancy and lactation. Int J Radiat Oncol Biol Phys 1978;4:693-8
8. Dequanter D, Hertens D, Veys I, Norgaret JM. Breast cancer and pregnancy. Review of literature. Gynecol Obstet Ferti 2001;29:9-14