

PREGNANCY AND BREAST CANCER: A CASE REPORT

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Abstract

During pregnancy cancer is rare, but in pregnant female breast cancer is the second most common cancer. Pregnancy associated breast cancer (PABC) is defined as breast cancer that is discovered during pregnancy or within one year of delivery. The present case is reported to emphasize the importance of early recognition of this condition. A 28-year-old antenatal female, who presented with palpable breast mass.

Keywords: PABC.

Introduction:

Pregnancy-associated breast cancer (PABC) is defined as breast cancer diagnosed during pregnancy or in the first postpartum year.¹ In 10 % of women diagnosed with breast cancer (BC) under the age of 40 years, the disease is associated with pregnancy.² Breast cancer affects approximately 1 in 3000 pregnant women and is the second most common malignancy affecting pregnancy.¹ The average age of women with PABC is 32 to 38 years.³ Only 6.5% of all cases of breast cancer affect women age < 40 years.⁴ As more women are delaying childbearing, researcher predicts that prevalence of pregnancy associated breast cancer will continue to rise.³ However, because PABC is a relatively rare event surrounded by multiple variables, few studies address the best management and treatment options.

The increased incidence of breast cancer following childbirth suggests that pregnancy may stimulate the growth of cells that have already undergone malignant transformation. While the exact mechanisms for this is unknown, estrogen and progesterone are established mitogens for breast tissue.^{5,6} Historically, it was assumed that PABC carried a worse prognosis than breast cancer. PABC generally presents at advanced stage, with larger primaries and more lymph node involvement. This may be due to the difficulty of detecting BC via physical examination, mammography and ultrasound in pregnant and lactating women.^{7,8}

Although there is a higher frequency of lympho-vascular invasion and high nuclear grade in PABC, these features are frequently found in patients under 40 years and are thought to be more correlated with age than pregnancy.² The current management of PABC closely follows the protocols in place for similarly staged breast cancer, and

PABC diagnosed after delivery is treated as typical breast cancer.⁹

Case Report

A 28 year old female noted a palpable mass in left breast, 2 month back, which was of pea size. It increased in size rapidly. She presented to her primary care physician who performed an examination and recommended ultrasound. Patient got her ultrasound done which showed irregularly heterogenous hypoechoic mass lesion with spiculated margins and foci calcifications within inner quadrant of left breast at 3-4'o clock position, accounting BIRADS score 4B. Patient was referred to our institute for further management. In surgery department, her physical examination was done. On local examination, a lump was found of 3*2centimetre in upper inner quadrant, hard in consistency with spiculated margins, not mobile from side to side. No skin changes, no lymph nodes palpated. Patient was advised for true cut biopsy and the result showed infiltrating carcinoma. Patient was referred to obstetrics department for induction.

Her antenatal period was uneventful. She had no family history of ovarian or breast cancer, and no personal history of breast disease. She was 37 week period of gestation by date. On per abdomen examination, uterine height was term size, cephalic presentation, liquor was adequate and pelvis was adequate. Fetal heart sound heard on left spino-umbilical line, 138 beats per minute. On per vaginum examination, os was 1finger, cervix early effaced, vertex at -3, membranes were present. She was induced with cerviprime gel. She delivered a baby girl of 2.6kg on 4/3/2021, with apgar score 7/10 at 1 minute and 9/10 at 5 minute post delivery. Her post partum period was

uneventful. Both mother and baby were discharged after 24 hours.

Patient followed in onco-surgery department after 4 weeks. She underwent modified radical mastectomy with level 2 axillary lymph node dissection. Patient was discharged on postop day 4 with stable vitals.

On histopathological examination of specimen, it showed infiltrating carcinoma with ER and Her 2 neu negative, PR and Ki67 positive (15%). She has received 4 courses of radiotherapy.

Discussion

PABC is defined as breast cancer presenting during pregnancy or up to one year postpartum. Naturally, PABC has added repercussions and diagnostic urgency given that the disease process and treatments ultimately affect both mother and fetus if diagnosed during pregnancy. Additionally, a myriad of physiological breast changes occur in response to the hormonal stimulation of pregnancy, which makes its clinical and radiologic evaluation technically difficult. They are usually diagnosed at more advanced stages and carries a worse prognosis.¹⁰ Mortality rates were shown to be nearly 50% higher for cases of pregnancy associated breast cancer (PABC) compared with non-PABC.

Women with PABC typically present with a firm, painless, and palpable lump that is frequently non-mobile.¹¹ Additional presentations include unilateral breast enlargement with skin thickening, nipple retraction, and nipple discharge.¹² As in non-pregnant patients, the most common breast cancer associated with pregnancy is invasive ductal carcinoma, with the pregnancy-associated malignancies having more aggressive histological features. Middleton et al showed that the most common histological subtype in 39 cases of PABC was a high-grade tumor that was estrogen and progesterone negative with increased rates of lymphovascular invasion.¹³

Conclusion

With increasing rate of late marriage and delayed childbearing, more cases of PABC are reported. It requires high index of suspicion for pregnant patient presenting with breast lump.

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