

## **Metastatic Breast Cancer of the Cervix Presenting in Labor**

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### **ABSTRACT**

**While breast cancer can metastasize to the ovaries and body of the uterus, it is rare to be found in the cervix.**

**We report a case with known lobular carcinoma of the breast who presented in labor with metastatic breast disease. On examination she was found to have a fungating mass in her cervix. Histology confirmed that the tumor was a metastasis from her breast carcinoma.**

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### **INTRODUCTION**

Metastatic tumors in the cervix are uncommon<sup>1</sup>. The source of metastasis has been reported from the gastrointestinal tract, the lung, the pancreas and the gallbladder<sup>2</sup>. Secondary melanoma of the cervix has also been reported. Metastatic breast cancer in the cervix is very rare<sup>3,4</sup>.

The aim of this report is to present a case of metastatic breast cancer presenting as a fungating mass in labor. To the best of our knowledge, we believe this is the first report of such case.

### **THE CASE**

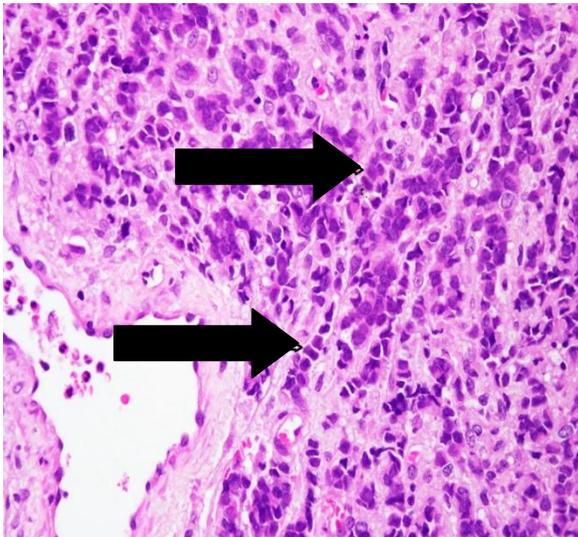
A forty-year-old woman (gravid 8, para 7) presented to the hospital with a breast lump. Her past medical and surgical history was unremarkable. She never had a mammogram or a cervical smear. The breast mass was painless, large (2x2 cm), irregular, mobile and nodular. Fine needle aspiration cytology (FNAC) was performed under ultrasound guidance. The cytology demonstrated right breast malignancy, lobular in nature (C5). The patient refused any further investigation or treatment despite much counseling.

She presented 5 months later at the antenatal clinic. She was 16 weeks advanced in pregnancy. She refused again any further investigation or treatment for her breast cancer. Antenatal care was uneventful. She attended the hospital regularly. Her fetus grew at a normal rate. She went into spontaneous labor at 39 weeks. On examination, the fetus was well-grown and the presentation was cephalic. On vaginal examination, a large fungating mass was found in the cervix. Delivery was performed by Caesarian section. The female infant was in good condition at birth and continued to thrive. The breast cancer was clinically more advanced than on initial presentation; it was larger and fixed to the chest wall.

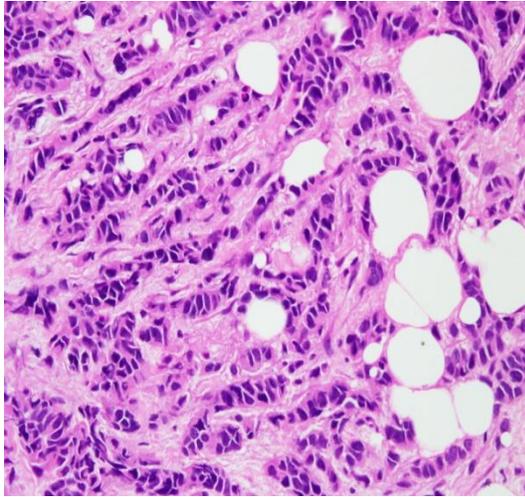
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The day following delivery, she had an examination under anesthesia. The cervix contained large nodular and fungating masses on the anterior and posterior lips. There was an extension to the right parametrium. A cervical biopsy demonstrated metastatic invasive lobular breast carcinoma. ER (Allred score 8/8), PR (Allred score 7/8) and HER2/neu were found negative. A trucut biopsy of the right breast mass revealed invasive lobular carcinoma (B5b). The biopsies from the cervix and breast showed identical tumors, see figures 1 and 2. CT scan of the chest, abdomen, pelvis and brain showed no evidence of further metastatic disease.



**Figure 1: Higher Magnification of Tumor Cells in Cervical Stroma in Single File Pattern**



**Figure 2: Invasive Breast Lobular Carcinoma**

Six months later, following three cycles of standard neoadjuvant chemotherapy including seven cycles of Taxol, the patient underwent a modified right mastectomy and right axillary lymphadenectomy. She made an uneventful recovery. The histology showed a mixed ductal and multicentric lobular carcinoma grade 2 with the involvement of four of the six lymph nodes. The epidermal growth factor (HER2/neu) was negative. Two months later, the patient received radiotherapy and hormonal therapy. A PET scan was reported negative. The patient continued to attend for follow-up and was clinically well.

## **DISCUSSION**

Breast cancer is the most common cancer affecting women, representing 30% of malignancies in females<sup>5,6</sup>. Metastases to the genital tract from extra pelvic primary malignancies most commonly involve the ovary (75.8%) and the vagina (13.4%)<sup>6</sup>. Metastases to the body of the uterus are less common (8.1%) and the cervix is rarely involved (3.4%). It is thought that oxygen tension in the ovaries and other metabolic features make it a preferred site for metastatic disease. It is reported that the cervix is a less usual site because of the smallness of the organ, not abundant blood supply and having just one afferent drainage system<sup>7,8</sup>.

Cervical cancer is the most common cancer in pregnant women and breast cancer is second. Breast cancer is diagnosed in one in 3,000 pregnancies<sup>9</sup>. It is reported that breast cancer associated with pregnancy has the worst prognosis<sup>9,10</sup>. The prognosis could be associated with hormonal and physiological changes in the breast, masking evidence of malignancy and resulting in delayed diagnosis<sup>10</sup>. Breast cancer in pregnancy occurs in a younger population who may have the characteristic of high risk of metastases, high-grade malignancy and negative estrogen receptor; these younger women may have a poor prognosis<sup>11</sup>. It is speculated that the present case of cervical metastasis was related to the pregnancy.

## CONCLUSION

**The association of malignancy with pregnancy presents difficult diagnostic and management problems. Women having breast cancer and pregnancy should have the same diagnostic techniques as non-pregnant women. When using diagnostic radiation, appropriate shielding of the fetus should be used. In a similar way, the mother should have the most appropriate treatment for her condition, though some modifications may be made.**

**We recommend that when breast cancer occurs in association with pregnancy, the mother should have a cervical smear as part of the initial assessment and have a pelvic examination at each antenatal visit.**

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