

Recurrent Invasive Ductal Carcinoma of the Breast with Metastasis to the Uterine Cervix

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Background: Breast cancer is the most common cause of cancer amongst women in the United States with an estimated incidence of 13%. Cervical metastases from primary invasive breast cancer is a rare occurrence with an estimated frequency of 0.8% to 1.7%. These cases have been largely documented through case reports and small case series with the majority being from invasive lobular carcinoma (ILC) and minimal cases arising from invasive ductal carcinoma (IDC). Cervical metastases are usually seen in the recurrent setting and can be present as an isolated recurrence or as the first presentation of widely metastatic disease.

Objective: With this case report, we present a rare and atypical presentation of primary breast IDC with metastasis to the cervix with a time to recurrence of more than twenty years.

Case Presentation: A 72-year-old woman with a history of estrogen receptor positive IDC of the left breast was initially treated with radical mastectomy and a lymph node dissection. This was followed by adjuvant chemotherapy with Adriamycin/Cyclophosphamide and adjuvant radiation. She subsequently was on tamoxifen therapy for 7 years. Twenty years later after completion of treatment, she presented to the emergency room with a one-day history of heavy post-menopausal bleeding and crampy pelvic pain. In the emergency room, her pelvic exam was significant for a friable, hyperpigmented cervix. At a prompt gynecology follow up appointment, two ectocervical biopsies revealed that the lesions were poorly differentiated carcinoma which showed immunoreactivity for CK7, GATA-3, ER (>70% cells), PR (40% of cells), and mammaglobin. The specimen did not have reactivity for P63, PAX8, or CDX2. P16 staining was focal/rare. Beta-catenin showed membranous staining, and E-cadherin expression was retained. Together, this phenotype supported carcinoma of breast origin. Her subsequent positron emission tomography (PET) scan revealed increased metabolic uptake within the inferior aspect of the uterus, which was consistent with carcinoma of the cervix. She subsequently underwent palliative radiation to the uterus/cervix with 3000 cGy in 10 fractions followed by systemic therapy with Abemaciclib and Fulvestrant. A repeat PET scan performed 12 weeks after radiation was completed showed an excellent treatment response in the cervix (Figure 1A-B).

Discussion: Currently there are an estimated of 35 cases of cervical metastases from primary breast cancer reported in the literature with less than 10 cases arising from primary IDC compared to ILC. IDC rarely presents with gynecological metastases in <1% of estimated cases. In our case report, while the clinical presentation has been similar to other previously published reports, the time of cervical recurrence is unique with the longest time reported in the literature of more than 20 years.

Conclusion: This case reports highlights the rarity of cervical metastases from IDC with recurrence occurring after more than 20 years. We hope to add to the existing literature on the presentation and treatment of cervical metastases from a primary IDC.

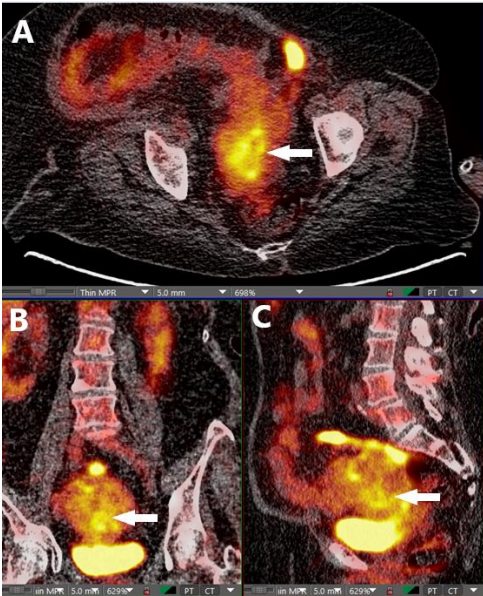


FIGURE 1A

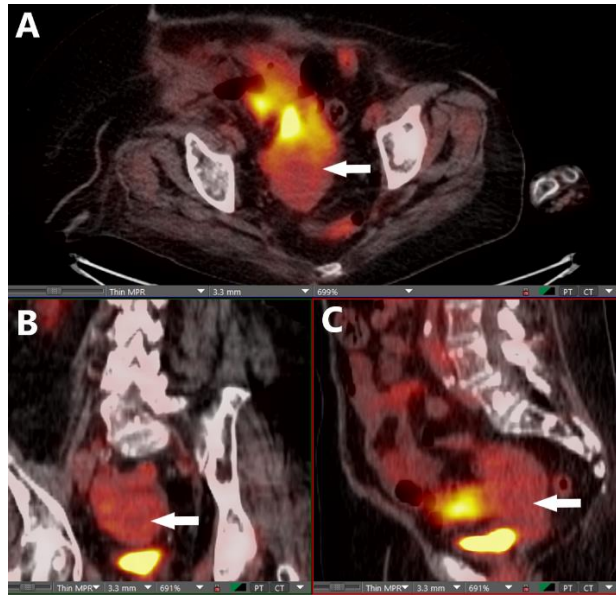


FIGURE 1B

Figure 1A: (Cervix pre- radiation 600dpi.tiff): Axial (A), coronal (B) and sagittal (C) fused ^{18}F FDG PET/CT images show abnormal increased FDG uptake in the lower uterine segment and cervix (white arrows), consistent with biopsy proven metastatic invasive ductal carcinoma of the breast Also noted are multiple sclerotic bone metastasis.

Figure 1B: (Cervix post radiation 600dpi. tiff): Axial (A), coronal (B) and sagittal (C) fused ^{18}F FDG PET/CT images show interval resolution of the previously seen abnormal increased FDG uptake in the lower uterine segment and cervix (white arrows).