

RADIATION ONCOLOGY CASE

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Endometriosis-derived clear-cell carcinoma masquerading as vaginal cancer

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CASE SUMMARY

The patient is a 47-year-old woman who presented with a 1.5-cm vaginal mass. Seven years ago, she underwent a total abdominal hysterectomy and bilateral salphingo-oophorectomy for endometriosis.

IMAGING FINDINGS

A vaginal lesion was biopsied and the final pathology was interpreted as a vaginal carcinoma that was predominantly clear-cell type arising in a background of endometriosis. However, a magnetic resonance imaging (MRI)

scan revealed a 2.5×2.1 -cm mass arising from the left adnexal region with extension to the vagina (Figure 1) that was intensely FDG-avid, suggestive of endometriosis-associated ovarian cancer (EAOC). The patient was treated with concurrent chemoradiation with

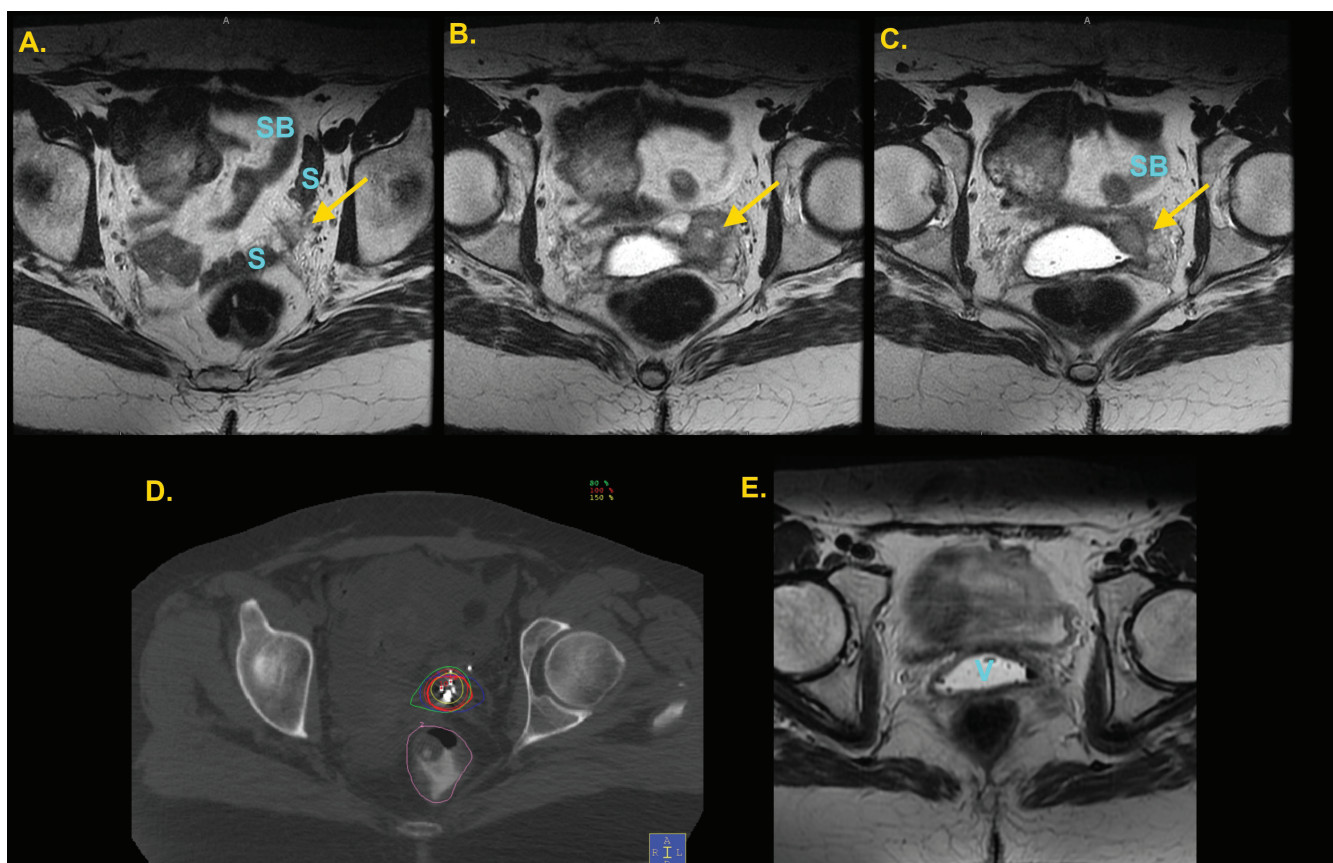


FIGURE 1. The images (A-C) are sequential pretreatment MRI slices from superior to inferior, demonstrating the mass (arrow) in the left adnexa abutting the sigmoid colon superiorly and extension into the vagina inferiorly. Image D is the treatment planning CT scan for the HDR brachytherapy component of her care. Image E is the follow-up MRI demonstrating a complete clinical response (SB = small bowel, S = sigmoid colon, V = vagina).

external beam radiation therapy (EBRT) to a dose of 50.4 Gy and radiosensitizing weekly cisplatin (40mg/m²). Upon completion of this, interstitial brachytherapy needles were placed under laparoscopic guidance as the adnexal mass was adherent to sigmoid colon (Figure 1). The patient was treated with image-guided high-dose rate (HDR) brachytherapy to a dose of 25 Gy in 5 fractions for an equivalent dose in 2 Gy fractions (EQD2) of 80.8 Gy. The patient is currently undergoing therapy with carboplatin and paclitaxel for a planned 6 cycles.

DIAGNOSIS

Endometriosis-associated clear-cell carcinoma arising in the adnexal region and presenting as vaginal cancer

DISCUSSION

Since its first description by Sampson, endometriosis has been considered a premalignant lesion with documented degeneration into clear-cell or papillary adenocarcinoma.¹ This is an unusual case of endometriosis-associated clear-cell carcinoma arising in the adnexal region and presenting as vaginal cancer. This

case was uniquely treated with chemotherapy and interstitial brachytherapy with complete metabolic and clinical response.

Endometriosis-associated ovarian carcinoma (EAOC) is a well-reported phenomenon. Even though it may present as a vaginal mass,^{2,3,4} in our patients, positron emission tomography/computed tomography (PET/CT) and pelvic MRI confirmed that the disease originated in the adnexa with extension into the vagina. Ours is the first case report utilizing laparoscopic-assisted HDR brachytherapy. Due to the lateral location of disease in the paravaginal tissue and pelvic sidewall, laparoscopic assistance was necessary to dissect and manipulate the small bowel so that the interstitial needles could be safely placed. HDR brachytherapy was delivered using an image-guided technique that enabled the conformal delivery of radiation to the target while minimizing dose to the critical structures.

CONCLUSION

While the role of adjuvant chemotherapy in the treatment of endometriosis-

associated clear-cell carcinoma arising in the adnexal region and presenting as vaginal cancer still remains to be defined, this patient has achieved a complete clinical response to therapy.

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