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Recurrent early stage endometrial carcinoma presenting as vaginal and colonic metastasis: A rare case report

Nitesh. R. Maurya[1,*], Urvi. C. Bhavsar[2], Sushrut. A. Bhukte[3], Vijayshree. S. Patil[4], Dhairyasheel. N. Savant[5]

[1]Senior Resident, [2]Junior Consultant, [3,4]Senior Registrar, [5]Senior Consultant, [1]Dept. of Gynac-Oncology, [2]Dept. of Gynaecology, [3,5]Dept. of Surgical Oncology, [4]Dept. of Anaesthesia, [1,3-5]Asian Cancer Institute, Mumbai, Maharashtra, [2]Sahil Speciality Hospital, Mumbai, Maharashtra, India

***Corresponding Author: Nitesh. R. Maurya**
Email: nitez.23@gmail.com

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Abstract
Endometrial cancer is the most common gynaecological malignancy with an incidence of 1 in 40,000. The risk of recurrence in early stage disease (International Federation of Gynaecology and Obstetrics (FIGO I and II) is between 3-15%. Of these that recur, 76-87% of cases occur within the first 3 years after initial treatment. The most common site of recurrence is the vaginal vault and the pelvis with very few cases of colonic metastasis reported in English literature so far. We report a case of 61 year old female, an operated case of endometroid adenocarcinoma FIGO IB with vaginal vault recurrence after 4 years of initial treatment. Patient was treated for vault recurrence with hormonal therapy and intracavitary RT. This was followed by metastasis to the rectal wall after 3 years of treating the vaginal vault recurrence. Here we discuss the case with a brief review of literature.

Keywords: Endometrial cancer, Vaginal recurrence, Colonic metastasis, Gynaecological malignancy.

Introduction
Endometrial cancer is the most common gynaecological malignancy with an incidence of 1 in 40,000.[1,2] The risk of recurrence in early stage disease (International Federation of Gynaecology and Obstetrics (FIGO I and II) is between 3-15%.[2,3] Of these that recur, 76-87% of cases occur within the first 3 years after initial treatment.[4] The most common site of recurrence is the vaginal vault and the pelvis with very few cases of colonic metastasis reported in English literature so far.[2]

Case Report
A 61 year old female was evaluated for pain in abdomen and constipation since past 15 days. Preliminary investigation with a contrast enhanced computed tomography (CECT) revealed a stricturous lesion at the recto-sigmoid junction involving the serosa. A colonoscopy was done which confirmed the lesion and biopsy from the lesion was reported as metastatic endometroid adenocarcinoma of the uterus (Fig. 1). Patient had previously undergone total abdominal hysterectomy with bilateral salphingo-oophorectomy and pelvic lymph node sampling for FIGO IB endometroid adenocarcinoma grade 2. A total of 16 lymph nodes were harvested which was negative for metastasis. Patient was treated with high dose rate (HDR) intracavitary brachytherapy to a total dose of 30 Gray in 5 fractions of 6 Gray each. Patient was kept on regular follow-up. 3 years after initial treatment, she underwent exploratory laparotomy for an appendicular abscess. Omental nodules found during exploration were sent for histopathology which reported as metastatic adenocarcinoma from the uterus. A PET-CT scan done revealed peritoneal deposits at vaginal vault. Immunohistochemistry was negative for hormonal receptors. She was given six cycles of chemotherapy with combination of a taxol and platinum compound. Post chemotherapy she was disease free which was evident on the follow-up CT scan. On a follow up CT- scan 2 years later, there was evidence of 2.4*2.8cms vaginal vault mass which was confirmed as metastatic adenocarcinoma on biopsy. It was positive for hormonal receptors and hence started on hormonal therapy. There was no evidence of disease progression on follow-up CT-scan after a year. A subsequent CT-scan after a year showed evidence of increase in size of vaginal mass. She was planned for Martinez Universal Perineal Interstitial Template (MUPIT). There was good response to MUPIT and the vaginal mass was resolved which was evident on a follow up CT scan at 3 months. 18 months after interstitial brachytherapy she developed pain in abdomen and increased frequency of stools. A detailed evaluation with CT- scan revealed a mild enhancing wall thickness at the distal sigmoid and recto-sigmoid junction with no significant luminal narrowing. Rectal biopsy with immunohistochemistry confirmed it as adenocarcinoma with positivity for CK-7 and PAX-8. PET-CT scan revealed a FDG avid circumferential thickening at the recto-sigmoid junction with an SUV_{max} = 23.7. In addition, 3 small FDG avid hypodense lesions were seen in segment VI, VII, and VIII with SUV_{max} =19.7. She was planned for 6 cycles of chemotherapy with taxol and platinum compounds. A review PET-CT scan after 6 cycles showed disease progression in the sigmoid colon with an increase in circumferential wall thickening and a SUV_{max}= 27.8. There was evidence of luminal occlusion with nodular serosal breach on the lateral wall. There were no significant changes in the liver lesions as compared to the previous scans (Fig. 1). Colonoscopy showed circumferential ulcerated growth causing luminal narrowing. She underwent palliative colectomy to relieve her of impending obstruction. Intraoperatively the disease was confined to recto-sigmoid

junction with involvement serosa (Fig 2a, 2b). Liver showed small metastatic parenchymal lesions involving segment VI and VII. Histopathology reported as metastatic endometrial adenocarcinoma. Immunohistochemistry was positive for hormonal receptors, CK-7 and PAX-8. A transcatheter arterial chemoembolization with curative intent was planned at a later date.

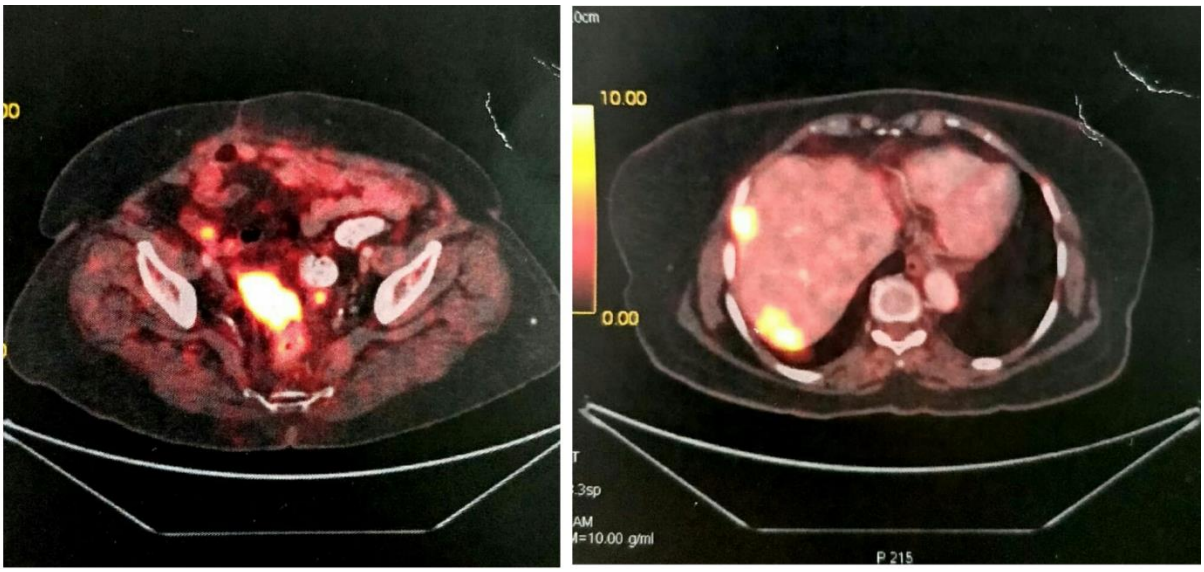

Fig. 1: PET- scan

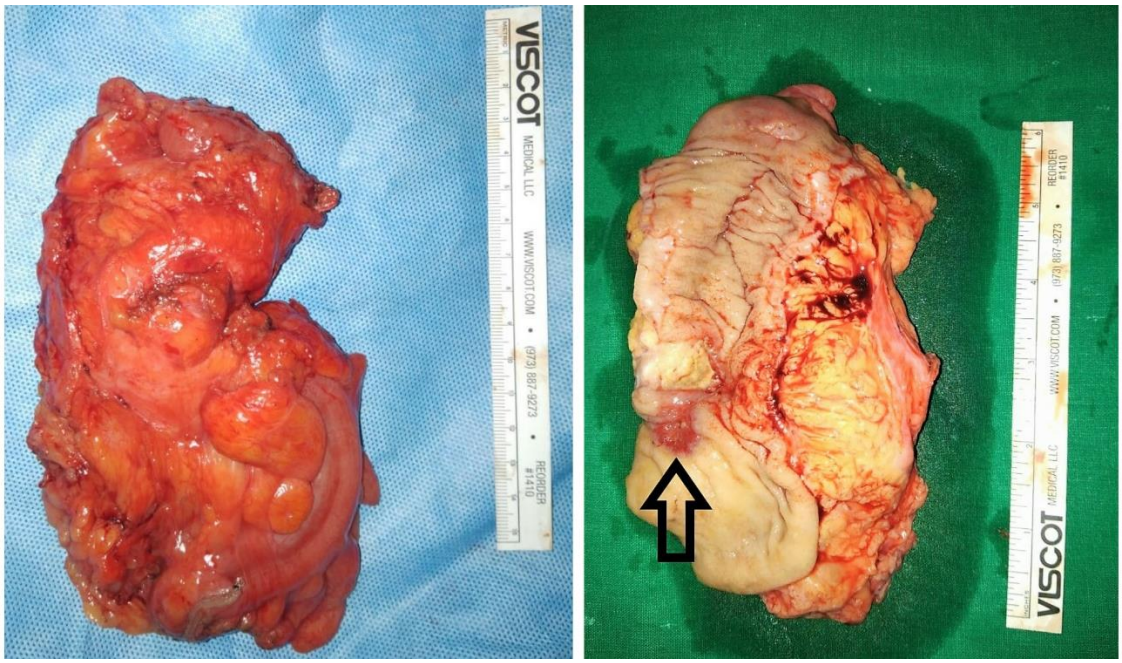

Fig. 2: Specimen

Discussion

Endometroid adenocarcinoma is the most common histological variant in uterine cancers.[5] Rate of recurrence in early endometrial cancer is approximately 3-15%.[2,3] 76-87% of the cases occurs within first three years of initial treatment.[4] The most common site for recurrence is the vaginal vault with very few cases of gastrointestinal tract involvement reported so far in the literature.

In our case patient initially had vaginal vault recurrence 4 years after initial treatment. Although rare, recurrence in early low grade endometrial carcinoma after initial surgery with intracavitary RT have been reported. Patient was treated with 6 cycles of chemotherapy and she responded well and was disease free for one year. Second recurrence at the vaginal vault occurred 14 months after treating first recurrence. It was hormonal receptor positive and was treated with hormonal therapy. The disease started progressing after two years to which patient was subjected to MUPIT resulting

in complete resolution of tumour. The aetiology of the recurrence may be attributed to senescence of tumour cells left behind after initial surgery, which survived through adjuvant radiation therapy during first recurrence and chemotherapy during second recurrence.[2] Also patient had recurrence in the gastro-intestinal tract with liver metastasis after a clinical latency of 2 years following the second recurrence. To our knowledge, in literature this is the first case of early endometrial cancer presenting as vaginal vault metastasis and metastasis to gastro-intestinal tract. Though vaginal vault recurrence is well know it is always important to rule out primary rectal origin of tumour. Immunohistochemistry serves as an important diagnostic tool in identifying the site of tumour origin in cases of difficult pathological differential diagnosis. Carcinoma of rectum generally show immunoreactivity for CK20 and CDX2 while tumours of Mullerian origin are positive for PAX-8.[6,7] In our case IHC was positive for PAX-8 thus establishing the metastatic origin of the rectal growth.

PE-CT scan serves as an important diagnostic tool in assessing treatment response as well as monitoring relapse. There are ongoing trials assessing the utility of PET-CT in monitoring treatment response. PET-CT was performed at baseline and at 2 weeks and 6 weeks following initial treatment. Changes in total lesion glycolysis (TLG) after 2 weeks predicted partial response and a rise in SUV_{max} between 2 weeks and 6 weeks predicted progression and was associated with worse progression free survival. In addition, early response evaluation with FDG PET/CT was useful in predicting subsequent radiological PR and progression disease.[8] Given the limited reported data on this issue, more investigation is needed. There are guidelines suggesting a higher sensitivity of PET-CT as compared to MRI and CECT for relapse assessment.[8,9]

Conclusion

Vaginal vault recurrence with subsequent rectal metastasis in early low grade endometrial cancer is very rare. It is important to keep this in mind for setting up an appropriate diagnostic and therapeutic protocol if such cases do recur. With appropriate continued surveillance, it is possible to achieve early diagnosis and perform a successful salvage therapy.

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