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Synchronous Primary Endometrioid Type Endometrial & Ovarian Adenocarcinoma; A Rare Case Report

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Abstract
Synchronous primary endometrial and ovarian cancer (SEOC) is a relatively uncommon disease. It can be of similar or dissimilar histologies, is commonly diagnosed at younger age, early stage, low grade and have better prognosis as compared to primary endometrial or ovarian cancer alone with metastasis to the other. SEOC presents as a diagnostic challenge for clinicians, as it has both therapeutic and prognostic importance. Here presenting a case of 51 year postmenopausal women presented with bleeding per vagina and pain abdomen for 4 months, which was diagnosed as SEOC of endometrioid subtype, in early stage (both in T1a, low grade, negative margin, no lymphovascular emboli). Considering the early stage and low grade of tumour, she was kept under follow up without any adjuvant therapy and presently has completed 2 years of disease free survival. So while dealing with endometrial malignancies in younger women, a thorough preoperative and intraoperative evaluation needed to rule out SEOC. Accurate diagnosis of SEOC can spare this group of patients from aggressive adjuvant chemotherapy or radiotherapy. Further prospective clinical studies required to establish standard management protocol for SEOC.
Keywords: *Endometrioid, Endometrium, Ovary, Synchronous primary carcinoma.*

Introduction

Synchronous primary malignancies of female genital tract comprise 0.63% of all genital malignancies. The most common type being the synchronous endometrial and ovarian malignancies.[1] Synchronous cancers can be classified into three groups; i) primary endometrial cancer with metastasis to the ovary (stage 3), characterized by large endometrial and small ovarian tumour, presence of atypical endometrial hyperplasia, deep myometrial invasion, direct adnexal extension and absence of ovarian endometriosis. ii) primary ovarian cancer with metastasis to the endometrium (stage 2),

characterized by unilateral single large ovarian tumour with small endometrial tumour, direct extension to outer wall of uterus, presence of ovarian endometriosis iii) synchronous primary endometrial and ovarian cancer (SEOC), characterized by disease limited to superficial myometrium, unilateral ovarian tumour, presence of atypical endometrial hyperplasia and ovarian endometriosis.[2] Young women with primary endometrial cancer are at high risk of having SEOC and also hereditary non polyposis colonic cancer (HNPCC). SEOC is found in 25% of younger women (≤45 years of age) with primary endometrial cancer.[3]

Case Report

A 51 year old multiparous, postmenopausal female presented with complain of vaginal bleeding on and off, pain in lower abdomen since 4 months. There was no family history of breast, colon or gynecological malignancies. Clinically she had no pallor, peripheral lymphadenopathy or ascites. On pelvic examination uterus was bulky and a firm, tender, mobile mass was palpable in left adnexa. Preoperatively all routine blood investigations, chest roentgenogram, electrocardiography findings were within normal limits. Serum CA-125 was increased (447 u/ml), whereas serum CEA, CA 19-9, AFP were within normal limits. Trans vaginal sonography revealed uterine endometrial polyp (26×22mm size), prominent endometrium and left adnexal complex lesion. Magnetic resonance imaging of lower abdomen revealed complex left ovarian cyst (89×84×71mm size) with endometrial polyp (3×3×2.4cm size) (fig. 1A&1B). Hysteroscopy guided biopsy from endometrial growth revealed complex hyperplasia with nuclear atypia. Following which, patient underwent total abdominal hysterectomy with bilateral salpingo-oophorectomy, omentectomy, pelvic and peritoneal brush cytology. Pelvic node dissection was not done. Post operative histopathology from the polypoidal mass in the endometrial cavity showed a malignant tumour invading the superficial myometrium with features of endometrioid adenocarcinoma (pT1a, grade-1, no lymphovascular invasion) (fig. 2). Multiple sections from left ovary also showed a malignant tumour with the same morphological features with intact capsule (fig. 3). Cut sections from the attached fallopian tube, right ovary and fallopian tube, omentum were histologically unremarkable. The pelvic and peritoneal brush cytology was negative for malignancy. Overall features were suggestive of synchronous endometrioid adenocarcinoma of the endometrium and ovary. Considering the early stage and low grade of the disease, patient was kept under observation without any adjuvant treatment. She was symptom free and serum tumour markers (CA-125 and CA19-9) were within normal limits during the period of regular follow up. Repeat computed tomography of whole abdomen during the second year follow up showed no findings suggestive of disease recurrence (fig. 4).

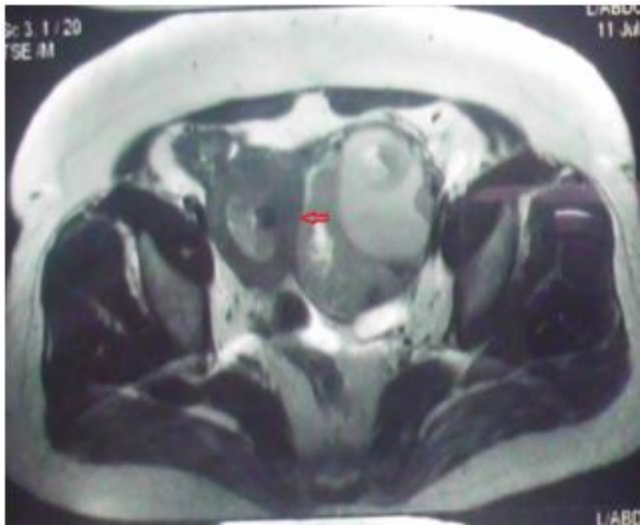

Fig. 1: Magnetic resonance imaging of lower abdomen showing complex left adnexal cyst (approx. 89×84×71mm size) and endometrial polyp (approx. 3×3×2.4cm size) with intact fat plane (red arrowed) between uterine wall and the adnexal cyst.

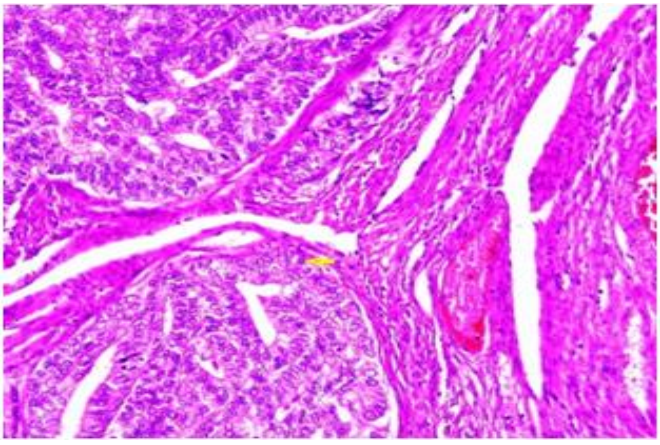

Fig. 2: Photomicrograph (H & E, ×400) of cut sections from uterus, showing malignant tumour cells with pleomorphic and hyperchromatic nuclei limited to the superficial myometrium (yellow arrowed).

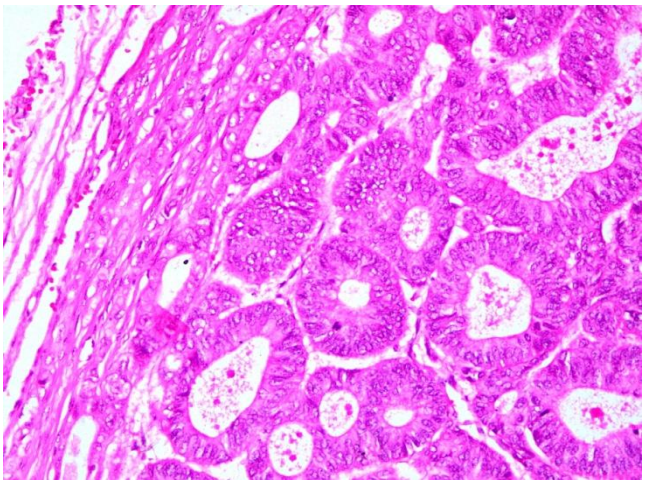

Fig. 3: Photomicrograph (H & E, ×400) of cut sections from ovary, showing malignant tumour cells having pleomorphic and hyperchromatic nuclei.

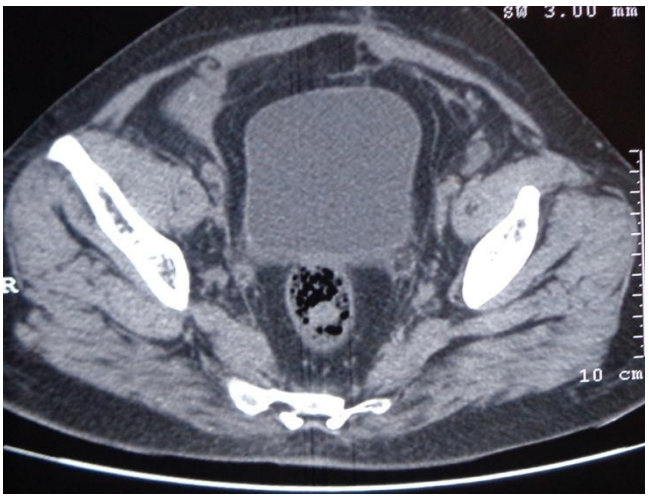

Fig. 4: Computed tomography of pelvis showing post operative status (TAH + BSO) with no findings suggestive of disease recurrence.

Discussion

SEOC being relatively rare, poorly understood disease, frequently presents as diagnostic challenge for clinicians, because its natural course and tumour biology found to be different from primary ovarian or endometrial cancer with metastasis to other. SEOC is found in 3.3% of cases with primary endometrial cancer and 2.7% of cases with primary ovarian cancer.[4] It is commonly diagnosed in younger age, nulliparous women, early stage, low grade and has a better prognosis as compared to stage 2 ovarian cancer (with metastasis to uterus) or stage 3 endometrial cancer (with metastasis to ovary).[5] whereas the present case was diagnosed in a post menopausal, multiparous women at the age of 51 years. SEOC most commonly presents with abnormal uterine bleeding (AUB), so diagnosed earlier than primary ovarian cancer (diagnosed commonly in advanced stage due to nonspecific presentation).[5] SEOC can be of similar or dissimilar histologic types. SEOC of both endometrioid histologies are the most common subtype with early stage and low grade at diagnosis and shows better survival potential than non endometrioid or mixed histological types (median survival of 119 months vs. 48 months respectively, p=0.02).[6] The findings of above studies are in concordance with the present case finding, where patient presented with AUB, diagnosed as SEOC of endometrioid histology, both in PT1, N0, G1, without lymphovascular invasion. SEOC with similar histologic subtypes need detailed histological study with immunohistochemical studies for diagnostic confirmation. Reid Nicholson M, et al in their study on endometrial adenocarcinoma found that vimentin positive and CEA negative remained the most constant among all primary endometrial cancer patients.[7] Endometrioid adenocarcinoma of endometrium characteristically express ER, PR, KRAS, PTEN & β-catenin.[8] Whereas, primary ovarian cancer express PAX-8, which is not expressed in endometrial primaries.[9] Adequate surgical staging is the mainstay in the management of SEOC. Accurate diagnosis of

SEOC is important, because it is most commonly diagnosed in FIGO stage IA and would be adequately treated by surgery alone followed by regular follow up, whereas primary endometrial or ovarian cancer with metastasis to other necessitates aggressive adjuvant chemotherapy or radiotherapy. Adjuvant treatment has not shown any significant advantage in this group of patients when compared to regular follow up after adequate surgical staging.[4] Similarly in the present case, following surgery no adjuvant treatment was given and patient has completed 2 years of disease free survival and presently under regular follow up. The 5 year overall survival of women with SEOC found to be better (92.8%) than that of women with either primary ovarian or endometrial cancer (48.5%).[6]

Conclusion

Young women with endometrial cancer are at increased risk of SEOC. Therefore careful histological assessment of uterus and both ovaries including IHC studies should be considered in this group of patients. Accurate diagnosis of SEOC by ruling out stage 3 endometrial cancers or stage 2 ovarian cancers can spare this group of patients from aggressive adjuvant treatment for increasing the quality of life. Further prospective clinical studies with larger sample sizes and longer follow up are needed to establish a standard management protocol in SEOC.

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