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Synchronous type ii endometroid adenocarcinoma of the ovary and endometrium: A case report

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Abstract
Objective: The synchronous endometrial and ovarian cancer is a rare phenomenon with incidence of 1.4 to 3.8%. Mostly in SEOC, the ovarian endometroid carcinoma arises in background of endometriosis with endometrial carcinoma with lower stage and lower grade in premenopausal age group.
Case report: We are reporting a case report of Synchronous type 2 endometrial and ovarian cancer \ with an unusual presentation at later age of 70, in postmenopausal lady with higher grade of endometrial carcinoma and higher stage of ovarian cancer and patient was treated with adjuvant chemotherapy followed by vault brachytherapy in view of Stage II B ovarian cancer and IA grade 3 endometrial cancer.
Conclusion: The SEOC being a rare phenomenon with different therapeutic and prognostic considerations, and hence can be managed with multidisciplinary approach and regular follow up.

Keywords: Synchronous endometrial ovarian cancer, endometrioid, endometriosis

Introduction
The carcinoma in the uterus and ovary concurrently are found in 10% of ovarian cancer and in 5% cases of endometrial cancer. The synchronous presence of two independent primaries i.e endometrial and ovarian cancer in a patient at the time of diagnosis is known as Seoc(Synchronous Endometrial Ovarian Cancer). In the present case report. we report a case of synchronous type II endometrial and ovarian carcinoma.

Case Presentation
A 70 year old postmenopausal lady with diabetes and systemic hypertension presented to our OPD with complaints of spotting per vaginum on and off since 8 months. She gave history of undergoing a laparotomy for removing uterus 11 years ago which was abandoned as she had dense adhesions in the pelvis and uterus and ovaries were not visible. After the unsuccessful laparotomy she achieved symptom control of her AUB through medical management (Danazol) and was asymptomatic till the present episode.
On clinical examination there was soft cystic mass of 8x 8 cm in the lower abdomen with same mass felt on vaginal examination. Ultrasonography showed endometrial thickness 29mm with normal sized uterus with 8x 7 cm right adnexal cyst. Her tumor markers were within normal limits {CA125 was 19.3 and CEA 3.1). Endometrial biopsy showed endometrioid carcinoma and Magnetic resonance imaging showed normal sized uterus with seedling fibroids and small hyperintense lesion in lower endometrium infiltrating inner myometrium. MRI also showed a left adnexal cyst of 9x9x7 cm with internal hemorrhage She underwent staging surgery and intraoperatively, dense adhesions were found in the pelvis. There was a 9x 10 cm left ovarian mass adherent to rectosigmoid and left pelvic wall. Uterus was buried under the adhesions. After careful adhesiolysis, uterus and normal looking right ovary and tube was visualized. A 2 x 2 cm tumor deposit was seen in the pouch of douglas. Complete staging including hysterectomy, bilateral salpingo oophorectomy, lymphadenectomy and omentectomy was done.
Histopathology examination showed an irregular growth in the endometrium measuring 1.3x1x0.2cm and a polyp measuring 1cm. Right ovary showed a cyst 1.9cm in greatest dimension. Left ovary was cystically enlarged, with solid and haemorrhagic areas.

Microscopy showed endometrium with a neoplasm composed of cells arranged in glandular, cribriform and papillary pattern. The cells had moderate cytoplasm and vesicular nuclei with prominent nucleoli. Many cells with clear cytoplasm were also noted. Mitosis noted,1-2/HPF. Luminal necrosis noted. The neoplasm was seen to infiltarte the inner myometrium. No LVE/MELF pattern were seen. Endometrium also showed a benign polyp. Fig.1

Sections from right ovary showed a neoplasm composed of cells arranged in papillae, fused glandular, cribriform and focal solid areas (<5%). Lining cells are composed of stratified, columnar to cuboidal cells with smooth luminal border, moderate eosinophilic cytoplasm and mildly pleomorphic vesicular nucleus with small nucleoli. Numerous apoptotic bodies seen. Luminal necrosis and squamous morules were seen. Fig.2

Left Ovary showed an endometriotic cyst.

Bilateral Fallopian tubes and omentum were free of tumour. Lymph nodes were free of tumour, whereas POD Deposit was positive for tumour. Endometrial carcinoma showed morphological features of papillary carcinoma with high nuclear grade and clear cells, which suggested a type 2 carcinoma, which was confirmed with the immunohistochemical positivity with p53.ER was positive in 90% of tumour cells and PR in 70% of cells.

Right ovarian carcinoma showed the typical morphology of endometrioid carcinoma with squamous morules and left ovary showed an endometriotic cyst.

Ovarian carcinoma also showed p53 positivity with WT1 negativity and intense ER and PR positivity, suggesting a high grade endometrioid carcinoma (type 2).

As the endometrial carcinoma was confined to inner myometrium with no LV emboli and ovarian carcinoma was seen to be associated with endometrioisis, they were considered as synchronous primary carcinomas.

Case was discussed in multiple disciplinary tumor board and was decided for adjuvant chemotherapy followed by vault brachytherapy in view of Stage II B ovarian cancer and IA grade 3 endometrial cancer.

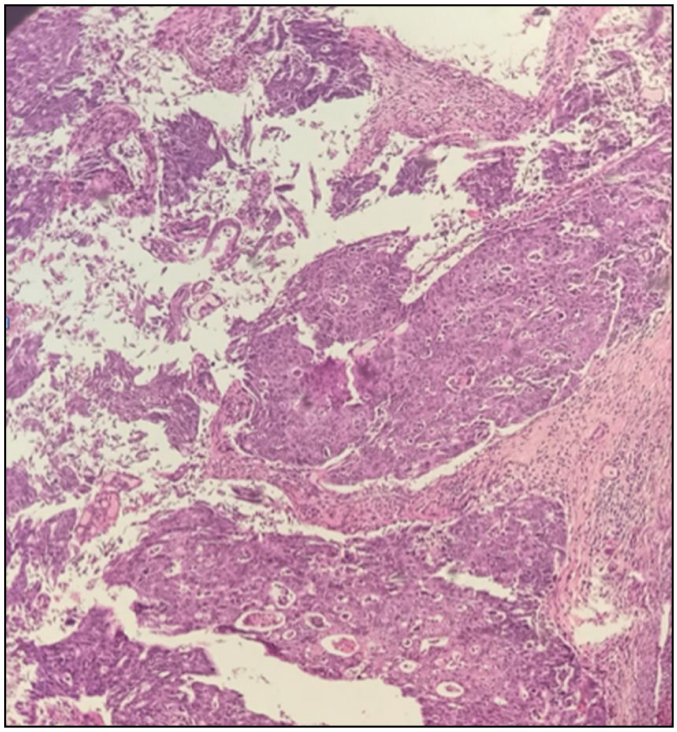

Fig 1: Histopathological appearance of carcinoma endometrium

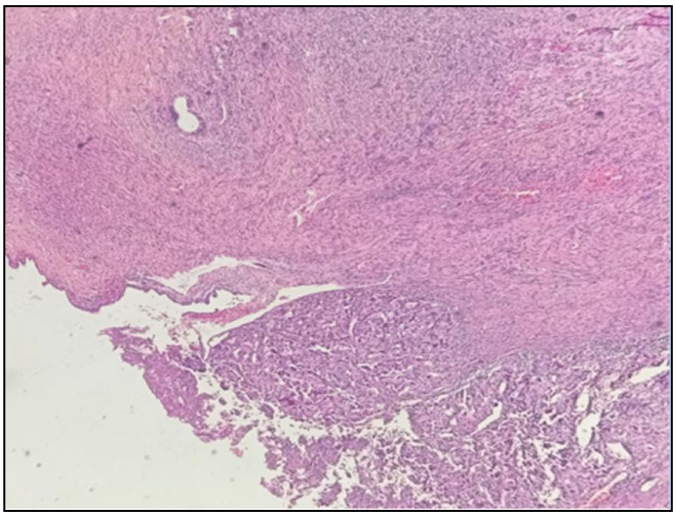

Fig 2: Histopathological appearance of Carcinoma ovary

Discussion

The incidence of synchronous endometrioid cancer of both ovaries and endometrium is 1.4 to 3.8%. This being a rare phenomenon with different therapeutic and prognostic considerations, makes it important to distinguish from the metastatic carcinoma. Endometrial cancer with synchronous ovarian cancer were more likely to be stage I-II disease, endometrioid or serous histology types, grade 1-2 tumors, and small tumor size in Matsou *et al*. study [1].

In most of the reports SEOC, the ovarian endometroid carcinoma arises in background of endometriosis with endometrial carcinoma with lower stage and lower grade [2]. Three case series of the women diagnosed with SEOC published by Markis *et al.* in 2017 had endometrioid subtype, grade 1, both in the ovarian and endometrial component [2].

Askin *et al.* in their case report have reviewed that 63 citations were identified reporting on young women with SEOC, defined for the purpose of this review as <50 years of age or premenopausal. and most cases of EC and ovarian cancer were early stage tumors with 72% of EC cases classified as FIGO stage I disease and 70% of ovarian cancer cases classified as FIGO stage I disease [3].

A population-based retrospective analysis of SEOCs by Matsuo *et al.* showed that among the endometrial cancer cohorts, synchronous primary endometrioid endometrial and ovarian tumors accounted for majority of the cases with 21.8% accounted for the high-grade (grades 2 and 3) tumors [1].

This case report has unusual presentation of SEOC at later age of 70, in postmenopausal lady with higher grade of endometrial carcinoma and higher stage of ovarian cancer when compared with the above mentioned review of literature.

PTEN and CTNBB1 mutations are found more frequently in SEOC than p53. In the study by ishikawa *et al.* the frequencies of somatic mutations in TP53, PTEN, CTNNB1, KRAS, and POLE were 3 (37.5%), 2 (25.0%), 3 (37.5%), 0 (0.0%), and 5 (62.5%) of 8 cases in ovarian tumors and 3 (37.5%), 2 (25.0%), 3 (37.5%), 1 (12.5%), and 5 (62.5%) of 8 cases in endometrial tumors, respectively [4].

In this case report both ovarian and endometrial tumors were p53 positive on Immunohistochemistry and P53 positivity is rare in SEOC. The histological grade is important because tumor with higher grade can be more aggressive with higher chance of recurrence.

Present report is to highlight a synchronous ovarian and endometrioid carcinoma with aggressive Type II features

presenting at an older age and higher stage than previously reported.

Conclusion

Synchronous ovarian and endometrioid carcinoma usually presents at premenopausal age group with lower grade and stage. But in case of an unusual presentation as in this case, it can be managed with multidisciplinary approach and regular follow up.

Conflict of interest disclosure: All authors declare no conflict of interest.

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