SQU JOURNAL FOR SCIENTIFIC RESEARCH:
MEDICAL SCIENCES 2001, 1, 51–53

Synchronous bilateral endometrioid ovarian cancer and uterine adenocarcinoma in a young woman

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تزامن سرطان المبيض من نوع الخلايا المبطنة للرحم مع سرطان الرحم في إمرأة شابة

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الملخص: إن سرطانات المبيض والرحم المتزامنة نادرة الحدوث وعند حدوثها فإن هذه السرطانات المتزامنة تمثل تحديا للأطباء عند التشخيص والعلاج ، وعلى وجه الخصوص إذا كانت من نفس النسيج السرطاني . وهنا نقدم حالة وقوع سرطان في المبيض والرحم في إمرأة تبلغ الرابعة والثلاثين من العمر مع مراجعة لمثل هذه الحالة .

ABSTRACT. Synchronous carcinomas involving both the ovary and uterine corpus are relatively uncommon. These tumours represent a diagnostic and therapeutic challenge, particularly if they have similar histology. Here we present the case of a 34-year-old woman with bilateral endometrioid cancers of both ovaries and adenocarcinoma of the uterus.

THE PRESENCE OF SIMULTANEOUS CARCINOMAS involving both the ovary and uterine corpus is relatively uncommon, and only 0.7–10% of patients with epithelial ovarian or uterine cancers have been found to have simultaneous tumours in large series.[1] However, these synchronous tumours represent a diagnostic and therapeutic challenge, particularly if they have a similar histology. Here we present the case of a 34-year-old woman with endometrioid cancers of both ovaries and adenocarcinoma of the uterus.

CASE REPORT

The patient was referred to our hospital because of metrorrhagia and lower abdominal pain of six months duration. She had started to menstruate at the age of 14 and her periods were irregular, occurring every 2–3 months, but with no associated abdominal pain. Five years earlier she had a spontaneous abortion during the12th week of gestation and evacuation had been done. Six months earlier, she had begun to experience excessive vaginal bleeding with severe abdominal pain. Findings of clinical examination were normal apart from mobile uterus just above the symphysis pubis. The vaginal examination revealed an irregularly enlarged uterus of 10 weeks gestation size, with mobile fornices. Ultrasound scan of abdomen revealed a bulky, multifibroid uterus, with bilateral ovarian masses. Her laboratory investigations were all within the normal

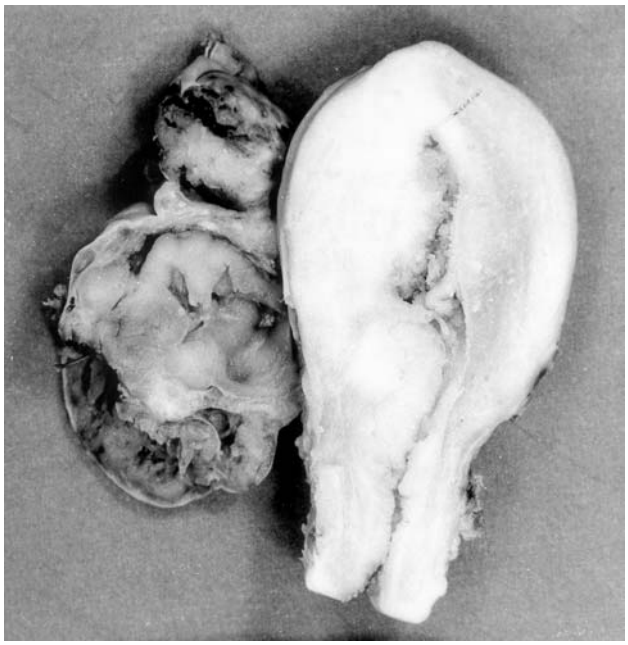

Figure 1. *The ruptured right ovarian tumour and the enlarged uterus*

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limits apart from high levels of cancer cell surface antigen 125 (CA125) of 322 IU/l.

An explorative laparotomy showed a large, ruptured right ovarian tumour measuring 12 × 10 × 8 cm, a smaller but similar left ovarian tumour measuring 7 × 6 × 5 cm and a bulky uterus [Figure1]. There was a single deposit on the anterior wall of the uterus and multiple deposits on the omentum. The largest of these deposits was <2 cm in diameter. However, the bowels, paracolic gutter, liver, and diaphragm were clear. Frozen sections of both the ovaries revealed endometrioid carcinomas. Therefore, total abdominal hysterectomy, bilateral salpingo-oophorectomy, appendectomy and total omentectomy were performed.

Histopathological examination showed well-differentiated bilateral endometrioid ovarian carcinomas with focal squamoid differentiation in the right ovarian tumour [Figures 2 and 3] and moderately differentiated adenocarcinoma of uterus infiltrating up to two-thirds of the depth of uterine wall [Figure 4]. There were multiple neoplastic omental lesions. Fallopian tubes and appendix were normal.

The clinical and histological picture was suggestive of at least two synchronous primaries:
(1) Fédération Internationale de Gynécologie et d'Obstétrique (FIGO) stage IIIb ovarian cancer with bilateral, large, diffuse, well differentiated endometrioid ovarian cancers with focal squamoid differentiation in right ovary; (2) FIGO Stage Ic uterine adenocarcinoma extending up to two-thirds of myometrium, with no associated endometrial hyperplasia.

The patient made an uncomplicated recovery following her surgery. Six weeks after surgery, her CA125 level decreased to 40 IU/l. She received six cycles of carboplatinum and paclitaxel chemotherapy, which resulted in further decline in her CA125 levels [Figure 5]. Subsequently she received 5000 cGy whole pelvis external radiotherapy, in 25 fractions through 15mV photons over five weeks, followed by whole vaginal intracavitary radiotherapy. Ten months after the diagnosis, she remains in clinical remission with CA125 of 1.7 IU/l.

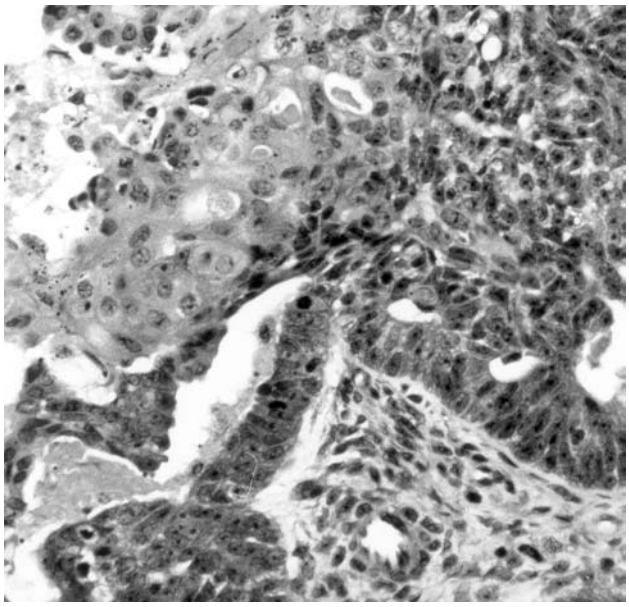

Figure 2. *Photomicrograph of endometrioid carcinoma of the right ovary with squamoid differentiation*

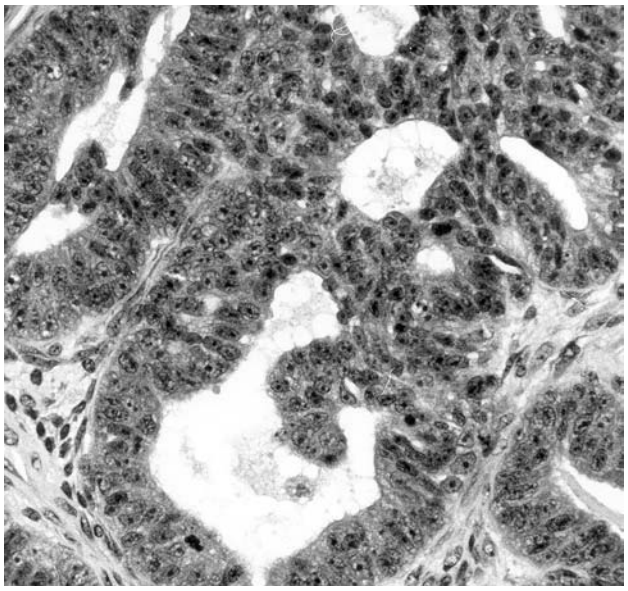

Figure 3. *Photomicrograph of endometrioid carcinoma of left ovary*

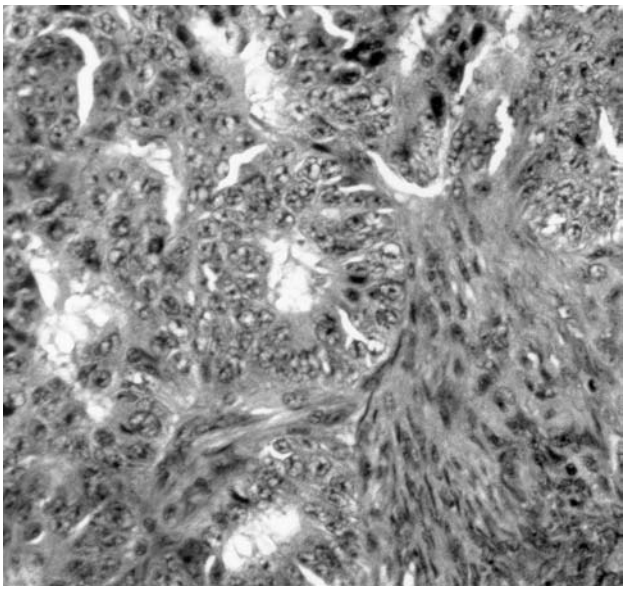

Figure 4. *Photomicrogaph of moderately differentiated adenocarcinoma of uterus*

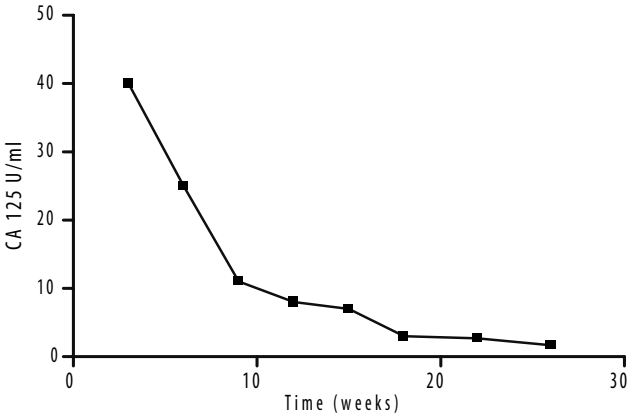

Figure 5. *Decline in CA125 with chemotherapy*

DISCUSSION

The simultaneous presence of carcinoma in the endometrium and in the ovary may indicate either metastatic disease or independently developing neoplasms. The classification of these lesions either as two separate primary tumours, or as a single primary tumour with a metastasis has implications for patient prognosis and recommendations for therapy. Several large retrospective studies of ovarian endometrioid cancers have demonstrated that the presence of co-existing endometrial adenocarcinoma was not detrimental to the prognosis of patients: in fact it has been suggested that they may indicate better prognosis.[2,3,4]

Although several morphological criteria have been proposed as guidelines for classification of these lesions, certain cases remain difficult to classify. Eifel et al suggested that if both the tumours were of endometrioid type, the neoplasms represented two separate primaries, and the patient had good prognosis. In contrast, histology of papillary, clear-cell or mucinous type suggested two separate primaries of different morphology, with poorer prognosis. Ulbright showed that concomitant endometrioid carcinoma of the ovary and adenocarcinoma of the endometrium, if moderately or well differentiated, was possibly independent in origin, whereas the poorly differentiated ones were possibly metastatic.[6] More recently it was suggested that molecular analysis might be useful in determining the relationship of synchronous uterine and ovarian endometrioid neoplasms. Emmert-Buck et al reported loss of heterozygosity in chromosomes 17q21.3-22 or 11q13 in 10 out of 13 patients who presented with endometrioid tumours in both uterus and ovary. However, eight cases had selective local osteolytic hypercalcemia (LOH) for one tumour site only, suggesting two separate primary tumours.[7] Similarly, Lin et al reported high incidence mutations of the human putative protein tyrosine phosphatase (PTEN/MMAC1) gene at chromosome in synchronous endometrial and ovarian carcinomas.[8]

The mainstay of the treatment is aggressive surgical cytoreduction with total abdominal hysterectomy, bilateral salpingo-oophorectomy, appendectomy and total omentectomy, followed by adjuvant treatment. As with other types of ovarian tumours, the treatment with platinum based chemotherapy has been shown to improve survival in simultaneous tumours. On the other hand, the administration of adjuvant radiotherapy to isolated FIGO Stage Ic uterine adenocarcinoma has been shown to improve outcome. However, it is not clear from the literature whether administration of radiotherapy influences prognosis where concomitant lesions exist

CONCLUSION

This case illustrates the issues raised by presentation of concomitant ovarian and uterine endometrioid cancers and the fact that it may affect relatively younger women, often requiring extensive surgery and adjuvant chemotherapy.

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