Synchronous primary endometrial and ovarian cancers: a case report

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Summary

Synchronous primary cancers of the endometrium and ovary are relatively uncommon in the general population. The patient, a 49-year-old postmenopausal Greek woman, presented with abdominal pain and a pelvic mass. She underwent total abdominal hysterectomy with bilateral salpingo-oophorectomy, total omentectomy, appendectomy and pelvic lymph node dissection. The histopathology revealed synchronous primary cancers of the endometrium and right ovary. She underwent postoperative chemotherapy. Thirty-nine months after surgery, she remains well without evidence of recurrence.

Key words: Synchronous primary cancers; Endometrial cancer; Ovarian cancer.

Introduction

Synchronous primary cancers of the endometrium and ovary are relatively uncommon in the general population [1]. Endometrial and ovarian cancer have several risk factors in common, and on this basis they could occur together in the same woman [2]. The two tumors may have a similar appearance or different histologic types. The median age at diagnosis is 50 years [3, 4].

Case Report

A 49-year-old, gravida 3, para 2 postmenopausal Greek woman presented with a complaint of abdominal pain. Her past surgical history was unremarkable. Her family history revealed no evidence of cancer among the first-degree relatives.

On gynecologic examination there was a palpable pelvic mass. There were no palpable inguinal lymph nodes, and the rest of pelvic examination was normal.

Preoperative computed tomography (CT) of the abdomen and pelvis, and abdominal ultrasound (US) revealed an intraabdominal mass 9.1 x 8.7 x 6 cm in size. The endometrium had a width of 5 mm and a monolayer appearance. Preoperative CT of the chest, chest X-ray, intravenous pyelography (IVP), colonoscopy and urethrocystoscopy were normal. Preoperative CA-125 was elevated to 65.9 U/ml.

On exploratory laparotomy, the right ovary was markedly distended, measuring 7 x 5 x 5 cm. Frozen section showed malignancy and the patient underwent total abdominal hysterectomy with bilateral salpingo-oophorectomy, total omentectomy, appendectomy and pelvic lymph node dissection.

Histopathology revealed synchronous primary cancers of the endometrium and right ovary. The uterine tumor consisted of glandular structures lined by simple to pseudostratified columnar cells and solid nests of neoplastic epithelium showing squamous differentiation. The uterine tumor invaded less than one half of the myometrium and extended to the endocervical glands. The ovarian tumor consisted of glandular and villoglandular structures with a delicate central core, lined by simple columnar cells, and invading the capsule. The left ovary was normal. The peritoneal washing smear was negative for malignant cells.

The final diagnosis was Stage IIa endometrial carcinoma adenosquamous type and Stage Ic ovarian carcinoma endometrioid type.

The patient underwent postoperative chemotherapy. She received six courses of carboplatinum (AUC 6) and paclitaxel (175 mg/m^2) but refused postoperative radiotherapy.

Twenty-five months after initial surgery, she developed palpable inguinal lymph nodes. CT of the abdomen and pelvis revealed pelvic and paraaortic lymph nodes with no other evidence of disease. The patient underwent second-line chemotherapy. She received four courses of carboplatinum (AUC 5) and pegylated liposomal doxorubicin (45 mg/m^2). After the end of chemotherapy the recurrence in the inguinal lymph nodes showed a remission.

Follow-up 39 months after initial surgery with CT of the chest, abdomen and pelvis, US, chest X-ray, IVP, colonoscopy and urethrocystoscopy showed no evidence of recurrence.

Discussion

Synchronous primary cancers of the endometrium and ovary are relatively uncommon in the general population [1]. Endometrial and ovarian cancer have several risk factors in common, and on this basis they could occur together in the same woman [2]. Hormonal causes may be involved in the pathogenesis but this etiology is not universally accepted. Future studies are needed to further evaluate the role of estrogen in these synchronous primary cancers of the endometrium and ovary [3].

Perhaps the response of the uterine corpus, fallopian tubes, and the ovarian epithelium as a morphologic unit could explain the development of synchronous endometrioid tumors in different components of the mullerian duct system, when simultaneously subjected to carcinogens [1,

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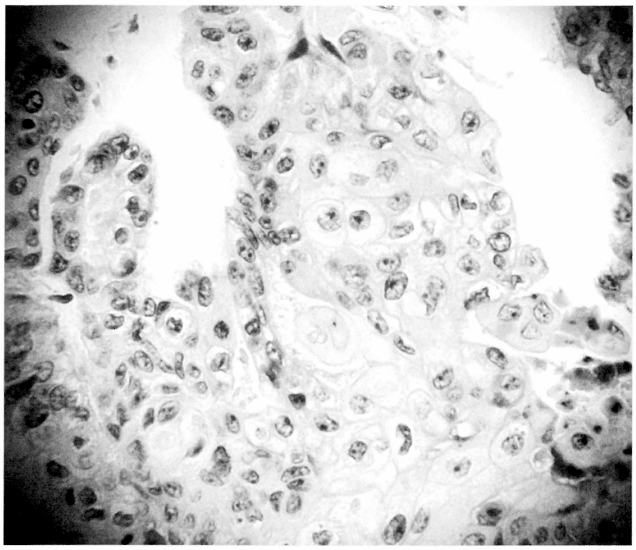

Fig. 1

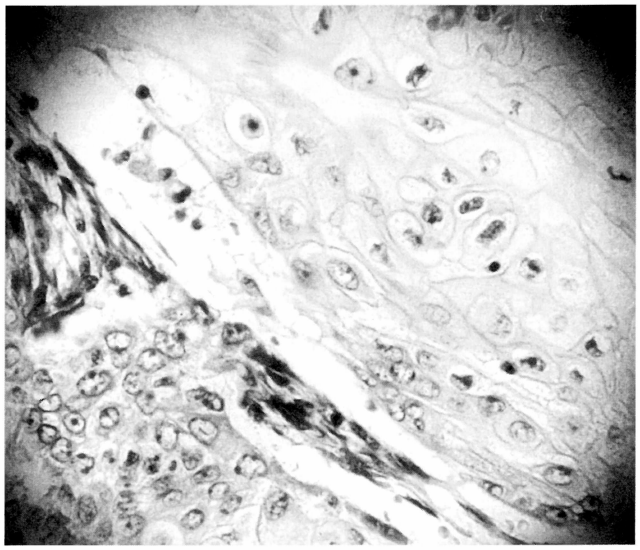

Fig. 2

Figures 1. & 2. — Adenosquamous type endometrial carcinoma (the squamous component was also malignant).

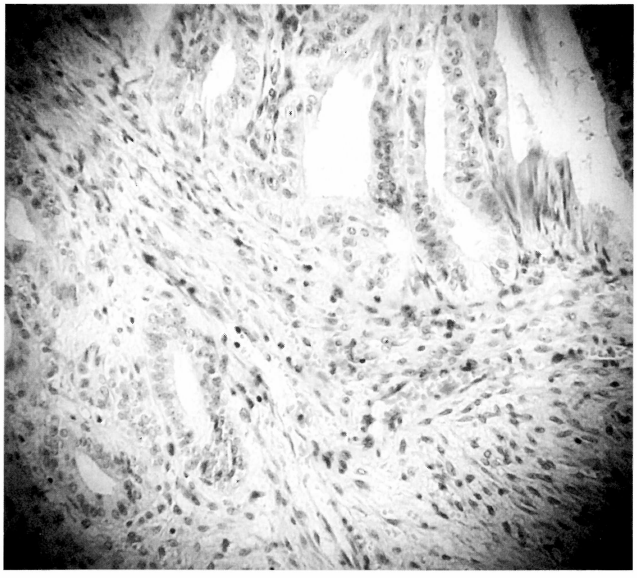

Figure 3. — Endometrioid type ovarian carcinoma (no squamous component was observed).

5]. It is also possible that the joint presence of these tumors is an indicator of an etiologically distinct condition [2]. Perhaps patients have a more fragile genome, and prior genetic damage may predispose them to both cancers. The two tumors may have a similar appearance (usually endometrioid but sometimes papillary, clear cell, or mucinous) or may be of different histologic types [4, 6].

The distinction between metastatic and synchronous primary cancers is relative easy when tumors have different histologic types. However, the distinction is relatively difficult when both tumors share the same histologic features. The empirical criteria for identification of the synchronous primary cancers include either different histologic types (major criterion) or all of the following minor criteria: 1. both tumors confined to primary sites, 2. no direct extension between tumors, 3. no lymphovascular tumor emboli, 4. no or only superficial myometrial invasion, and 5. no distant metastasis [1, 7]. According to these criteria, the present case is a case of synchronous primary cancers of different histologic type, thus fulfills the major criterion.

Patients with synchronous primary cancers tend to be 10-20 years younger than their counterparts with endometrial or ovarian carcinoma [6]. The median age at diagnosis is 50 years [3, 4]. The women have distinct clinical characteristics including young age, obesity, premenopausal status and nulliparity [3]. Independent prognostic factors for synchronous primary cancers seem to be age, stage of ovarian cancer, grade of endometrial cancer and adjuvant therapy [8].

Patients with synchronous primary endometrioid tumors of the endometrium and ovary (endometrioid/endometrioid) have a better median overall survival than those with non-endometrioid or mixed histologic subtypes [3, 6]. The Gynecologic Oncology Group (GOG) found that patients had an overall good prognosis with a 5-year survival of 86% and 10-year survival of 80% [4].

Treatment of choice of early-stage synchronous primary cancers is total abdominal hysterectomy with bilateral salpingo-oophorectomy, total omentectomy, appendectomy and pelvic lymph node dissection. In advanced-stage patients, more aggressive management with adjuvant chemotherapy or radiotherapy after surgery is required [1, 9]. The reason for the better median overall survival for these patients is not intuitively obvious [4]. Perhaps this may due to the detection of patients at earlier clinical stage and lower-grade disease state [5].

Conclusion

The reason for the better median overall survival of the patients with synchronous primary cancers is not intuitively obvious. Perhaps this may due to the detection of patients at earlier clinical stage and lower-grade disease state.

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