Chirurgia (2015) 110: 486-489
No. 5, September - October

Total Pelvic Exenteration for Synchronous Cervical and Ovarian Tumor – A Case Report

N. Suciu[1,2], I. Bălescu[3], N. Bacalbașa[1]

[1]"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania
[2]"Dr. Alfred Rusescu" Hospital (IOMC) Bucharest, Romania
[3]"Ponderas" Hospital, Bucharest, Romania

Rezumat

Exenterație pelvină totală pentru neoplasm sincron ovarian și de col – prezentare de caz

Neoplasmele ginecologice sincrone sunt situații extreme de rare, cea mai frecventă asociere fiind între neoplasmul ovarian și cel endometrial. În orice caz, cele mai multe cazuri prezentând o astfel de asociere au de fapt o singură tumoră, cea de-a doua fiind de fapt o leziune metastatică. În cazuri rare cele două tumori au structuri histologice diferite, susținând astfel ideea de neoplasme sincrone. Prezentăm cazul unei paciente de 41 ani care s-a prezentat pentru dureri abdominale difuze, scădere ponderală și sângerări vaginale neregulate care a fost diagnosticată cu neoplasm sincron de col și ovar în cazul căreia s-a practicat exenterație pelvină totală.

Cuvinte cheie: tumori sincrone, tumoră ovariană, tumoră de col, exenterație pelvină

Abstract

Synchronous gynecological malignancies are extremely rare situation, the most frequent encountered association consisting of endometrial and ovarian cancer. However, most cases presenting this kind of association have in fact a single primary tumor, the second one being a metastatic lesion. However, in rare cases different histopathological types are found, sustaining the idea of association of two synchronous tumors. We present the case of a 41-year-old patient who presented for diffuse abdominal pain, weight loss and irregular vaginal bleeding who was diagnosed with synchronous cervical and ovarian cancer in which a total pelvic exenteration was performed.

Key words: synchronous tumors, ovarian tumor, cervical tumor, pelvic exenteration

Corresponding author: Nicolae Suciu, MD
"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania

Introduction

Synchronous genital tract malignancies are rarely seen with an overall reported incidence of 0.63%, the most common association consisting of endometrial and ovarian cancer which account for up to 40% of all cases (1,2,3). Most commonly cases presenting with synchronous ovarian and cervical cancer present in fact similar histologies and are considered as a single primary tumor with metastatic involvement of the other viscera, a direct spread of the cervical malignant tumors to the ovary being incriminated. However, in very rare cases, different histopathological subtypes are found and the final diagnosis is of real synchronous cervical and ovarian cancer. These are very rare situations, only few case reports being published until now (4,5,6); due to the rarity of this situation, a standard therapeutic protocol is not established. However an aggressive surgical approach consisting of complete tumor resection seems to be the only potential curative solution

Case report

A 41-year-old patient presented for pelvic pain and abnormal vaginal bleeding. The local examination revealed the presence of a large cervical tumor which was biopsied, the histopathological studies revealing poorly differentiated squamous cell cervical cancer. The patient was submitted to a whole body MRI which also revealed the presence of bilateral ovarian tumors measuring 98/150/120 mm and 62/54 mm respectively associated to a cervical tumor measuring4/4 cm with demarcation limit with the rectum and with the urinary bladder wall. The MRI also revealed the presence of large necrotized iliac adenopathies associated with peritoneal carcinomatosis and ascites (Fig. 1, 2). A left grade II uretero-hydronephrosis was also encountered. The patient was submitted to surgery; intraoperatively a large pelvic mass with ovarian origin associated with a large cervical tumor with rectal and urinary bladder invasion were found, so a total pelvic exenteration was performed (Fig. 3-7). The histopathological studies confirmed the presence of two different tumors: a poorly differentiated squamous cell cervical tumor and a moderately differentiated serous ovarian adenocarcinoma. During the postoperative course the patient developed a deep venous thrombosis at the level of the left femoral vein which necessitated continuous administration of heparin for the next 8 days. The patient was discharged in the 20th postoperative day with oral anticoagulation treatment. One month after discharge adjuvant chemo-irradiation protocol was initiated.

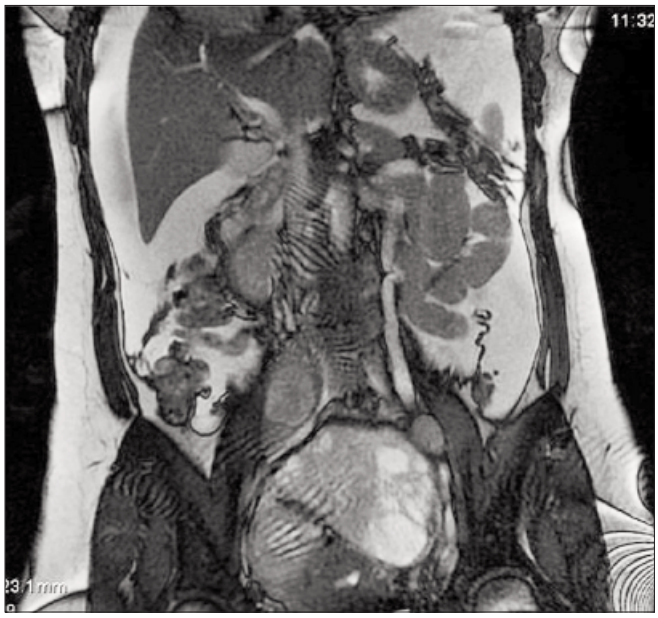

Figure 1. *Large ovarian tumor associated with ascites and nodules of peritoneal carcinomatosis. The left ureter is dilated*

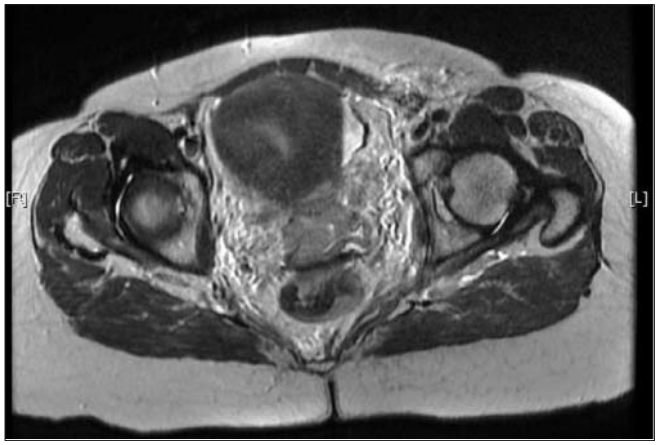

Figure 2. *Large cervical tumor with apparent lines of demarcation between the urinary bladder and the rectal wall*

Discussions

Synchronous malignancies of the ovary and the uterine cervix are rare situations in which the prognosis is established not only by clinical stage but also by the histological grade of the adenomatous component (6). However it has been stipulated that these patients do not have a poorer prognosis hen compared to patients diagnosed with single neoplasia while cases in which a single primary tumor with metastatic disease a poorer outcome is expected (6). The molecular mechanisms incriminated for the development of synchronous gynecological malignancies have been not yet established; however it seems that an association immunologic and genetic defects, prolongued exposure to carcinogens and previous history of chemo-irradiation might play a role (5). It has also been proposed that tissues with common embryological origin may develop synchronous malignancies: Slaughter et al introduced in 1953 the term of field cancerization of the head and neck mucosa undergoing malignant degeneration which seems to be directly proportional to the intensity and duration of the carcinogens' exposure (7). This concept was successfully implemented in gynecologic oncology under the generic name of "secondary mullerian system concept", in order to explain the apparition of synchronous primaries (8). Once the right diagnosis is established, the treatment protocol does not differ from the therapeutic strategies indicated for single primary tumors (9).

In 1961 Moertel et al reported six cases of cervical and ovarian cancer among 921 patients with double primary tumors; however they were not classified as synchronous or metachronous lesions (10). Twenty-three years later Axelroad et al reported three cases of synchronous invasive cervical cancer and ovarian cancer among 2362 patients registered in the Downstate Medical Center Tumor Registry (11). In 1989 Eisner et al reviewed data of 3863 patients diagnosed with gynaecological malignancies and found a single case of synchronous ovarian and cervical cancer (12). In 1983 other four cases were reported by LiVolsi et al (13) while in 2004 two cases with synchronous tumors were reported among 861 patients submitted to surgery for gynecologic malignancies in Taiwan (14).

In the study conducted by Tong et al, 20 patients with synchronous gynecological malignancies were included. The

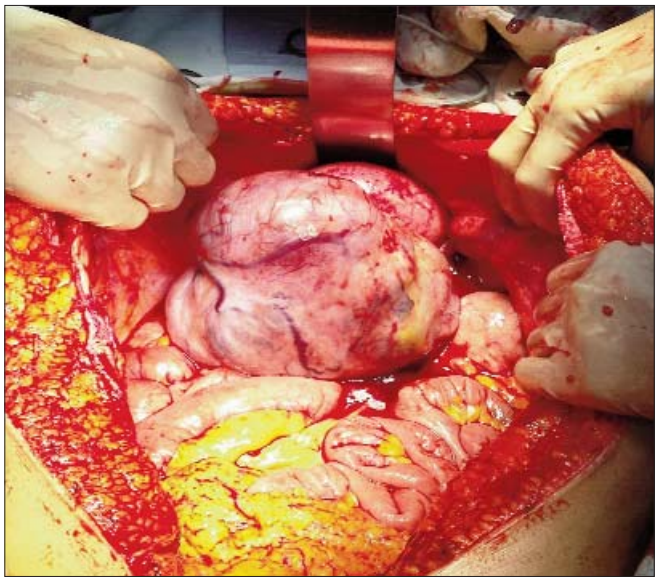

Figure 3. *Large ovarian tumor originating from the right adnexa*

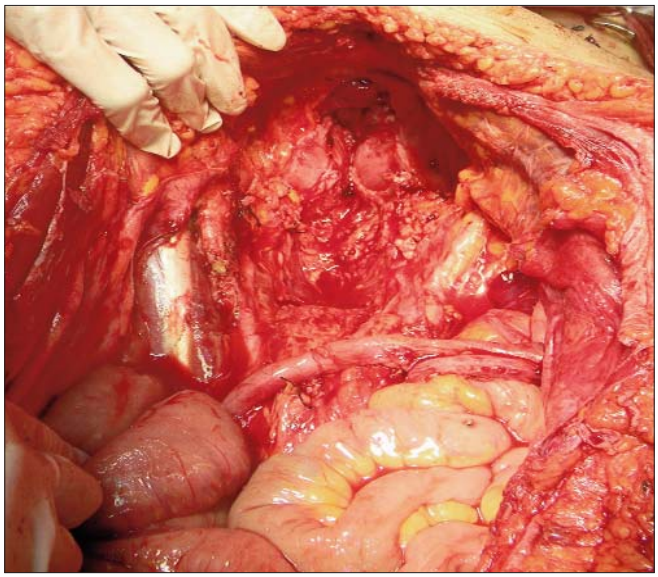

Figure 4. *The final aspect after resection: the two ureters were exteriorized in right ureterostomy*

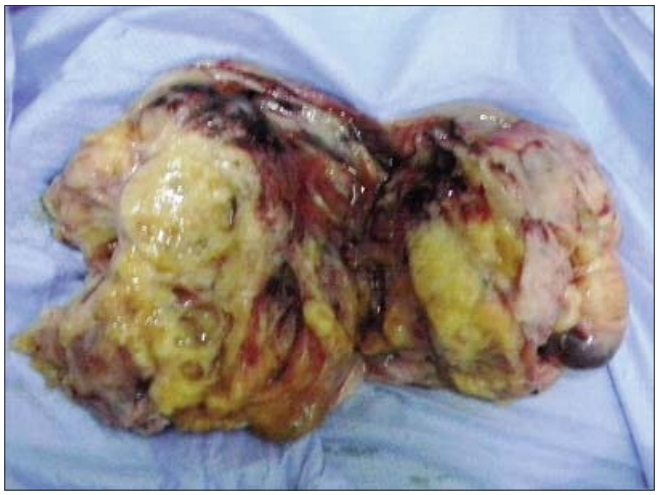

Figure 5. *Large ovarian tumor with solid and cystic areas.*

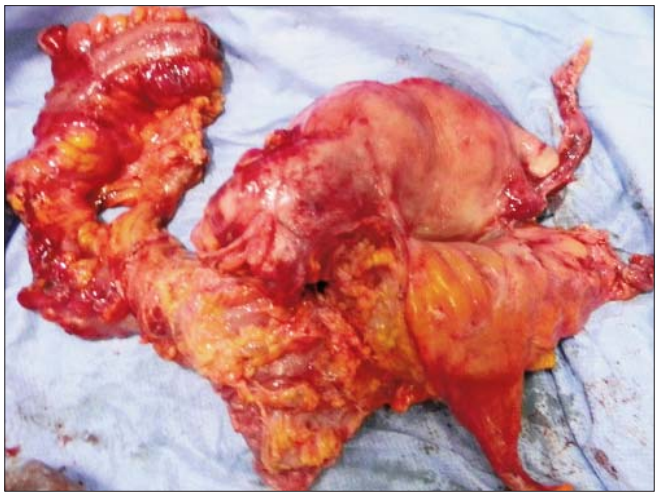

Figure 6. *Large cervical tumor invading the urinary bladder and the rectosigmoid*

main criteria for identification of synchronous primaries included detection of two different histopathological subtypes; other minor criteria referred to the absence of direct extension between the tumors, the absence of lympho-vascular tumor emboli, no or superficial myometrial invasion and the absence of distant metastases. Among the 20 patients, synchronous ovarian and cervical tumors were found in two cases. The authors concluded that surgery should be the treatment of choice in order to provide a correct diagnosis and staging for the reported tumors followed by adjuvant chemotherapy (15).

Similarly to our case, Huang et al reported the case of a 30 year old patient submitted to surgery for a preoperative diagnosis of stage IIIC ovarian cancer. A total abdominal hysterectomy, bilateral salpingo-oophorectomy, bilateral pelvic lymph node dissection, para-aortic lymph node sampling, bilateral infundibulopelvic ligament resection, appendectomy and omentectomy were performed. Surprisingly, the histopathological studies revealed the presence of an endometroid ovarian carcinoma associated with an endocervical mucinous adenocarcinoma. The final staging described a stage IIIC ovarian carcinoma associated with stage IA1 cervical cancer. Postoperatively the patient was submitted to adjuvant platinum based and taxanes chemotherapy but she developed a progressive cachexia and dyspnea and finally died of respiratory failure eight months after surgery (16).

In order to better distinguish between synchronous lesions and metastatic tumors, Elishaev et al reported that the absence of human papilloma virus DNA in the structure of ovarian tumor cells will rather be a criteria to consider the lesions as synchronous malignancies (17).

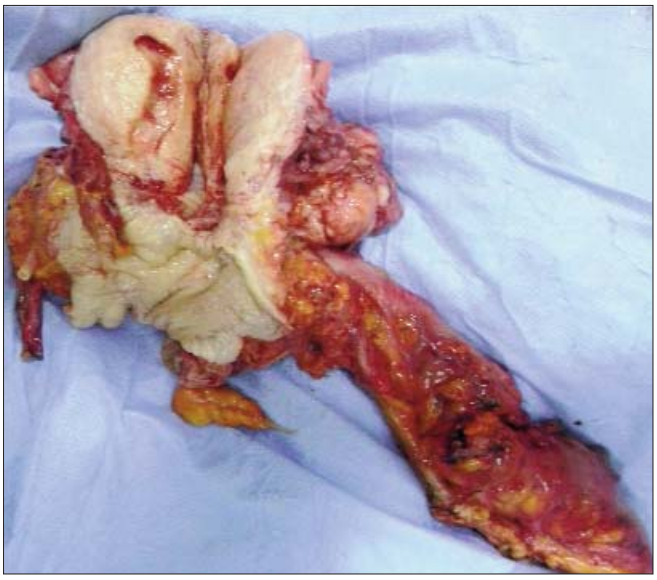

Figure 7. *Specimen of total pelvic exenteration*

Conclusions

The presence of synchronous cervical and ovarian malignancies is an extremely rare situation in which both the tumor stage and the histopathological subtype will influence the prognosis. These patients usually do not have a poorer prognosis when compared with cases with single primaries. However, the particularity of our case was the presence of two locally advanced synchronous lesions: an advanced stage ovarian cancer with omental involvement associated with a large cervical tumor invading the urinary bladder and the rectal wall.

Acknowledgement

This work received financial support through the project entitled "CERO – Career profile: Romanian Researcher", grant number POSDRU/159/1.5/S/135760, co-financed by the European Social Fund for Sectorial Operational Programme Human Resources Development 2007-2013.

References

1. Ayhan A, Yalcin OT, Tuncer ZS, Gurgan T, Kucukali T. Synchronous primary malignancies of the female genital tract. Eur J ObstetGynecolReprodBiol 1992; 45(1):63-66.
2. Srivastava K, Zahra F. Synchronous primary malignancy of ovary and cervix with different histopathology: a rare presentation. The Internet Journal of Gynecology and Obstetrics 2009; 12(2).
3. Kambi DP, Mallikarjuna M, Santosh C, Abhishek V. Synchronous malignancies of ovary, fallopian tube and cervix: A rare case. International Journal of Biomedical and Advance Research 2013;4(9):676-679.
4. Katke RD, Gadekar S, PagareP. A Rare Case of Carcinoma of Ovary with Carcinoma of Cervix, Journal of case Reports 2014; http://dx.doi.org/10.17659/01.2014.0055
5. Kambi DP, Mallikarjuna MN, Santosh CS, Abhishek V. Synchronous malignancies of ovary, fallopian tube and cervixA rare case. International Journal of Biomedical And Advance Research 2013; 09(04)
6. Srivastava K, Zahra F. Synchronous primary malignancy of ovary and cervix with different histopathology: a rare presentation. The Internet Journal of Gynecology and Obstetrics 2009; 12(2).
7. SLAUGHTER DP, SOUTHWICK HW, SMEJKAL W. Field cancerization in oral stratified squamous epithelium; clinical implications of multicentric origin. Cancer 1953; 6(5):963-968.
8. Garcia SB, Novelli M, Wright NA. The clonal origin and clonal evolution of epithelial tumours. Int J ExpPathol 2000; 81(2):89-116.
9. Zaino R, Whitney C, Brady MF, DeGeest K, Burger RA, Buller RE. Simultaneously detected endometrial and ovarian carcinomas--a prospective clinicopathologic study of 74 cases: a gynecologic oncology group study. GynecolOncol 2001; 83(2):355-362.
10. MOERTEL CG, DOCKERTY MB, BAGGENSTOSS AH. Multiple primary malignant neoplasms. I. Introduction and presentation of data. Cancer 1961; 14:221-230.
11. Axelrod JH, Fruchter R, Boyce JG. Multiple primaries among gynecologic malignancies. GynecolOncol 1984; 18(3):359-372.
12. Eisner RF, Nieberg RK, Berek JS. Synchronous primary neoplasms of the female reproductive tract. GynecolOncol 1989; 33(3):335-339.
13. LiVolsi VA, Merino MJ, Schwartz PE. Coexistent endocervical adenocarcinoma and mucinous adenocarcinoma of ovary: a clinicopathologic study of four cases. Int J GynecolPathol 1983; 1(4):391-402.
14. Wung RT, Su HY, Wu CC, Zhu BW, Yu MH. Synchronous primary gynecologic malignancy. Chung Hua Min Kao Fu Yen I HsuehTsaChih 2004;2:20–27
15. Tong SY, Lee YS, Park JS, Bae SN, Lee JM, Namkoong SE. Clinical analysis of synchronous primary neoplasms of the female reproductive tract. Eur J ObstetGynecolReprodBiol 2008; 136(1):78-82.
16. Huang YD, Hung YC, Yeh LS, Chiang IP, Zeng GC, Chang WC. Synchronous ovarian endometrioid adenocarcinoma and endocervical mucinous adenocarcinoma. Taiwan J ObstetGynecol 2006; 45(3):264-267.
17. Elishaev E, Gilks CB, Miller D, Srodon M, Kurman RJ, Ronnett BM. Synchronous and metachronous endocervical and ovarian neoplasms: evidence supporting interpretation of the ovarian neoplasms as metastatic endocervical adenocarcinomas simulating primary ovarian surface epithelial neoplasms. Am J SurgPathol 2005; 29(3):281-294.