

Complete Cytoreduction Combined with Early Postoperative Intraperitoneal Chemotherapy for Ovarian Carcinosarcoma

Report of Two Cases

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Key Words

Ovarian carcinosarcoma · Peritoneal malignancy · Cytoreduction · Early postoperative intraperitoneal chemotherapy

Abstract

Background/Aims: The purpose of the study is to report two long-term survivors with ovarian carcinosarcomas, which are rare intrapelvic malignancies with unfavorable prognosis. **Methods:** Two middle-aged women with palpable abdominal tumors underwent complete cytoreductive surgery and no macroscopic tumor was left behind. Early postoperative intraperitoneal chemotherapy with doxorubicin was used as an adjuvant treatment. **Results:** The patients are disease-free 2 and 3 years, respectively after the initial therapy. **Conclusion:** Complete cytoreduction combined with early postoperative intraperitoneal chemotherapy seems to be an effective treatment for ovarian carcinosarcoma with peritoneal spread. Further studies are required to define the value of intraperitoneal chemotherapy in ovarian carcinosarcoma.

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Introduction

Ovarian carcinosarcomas are rare malignancies with unfavorable prognosis comprising less than 1% of ovarian cancer. They are usually associated with peritoneal spread and ascites at the time of initial diagnosis [1]. A few patients with advanced disease have been reported as long-term survivors. The optimal therapeutic plan has not been defined yet. Systemic chemotherapy is effective in selected patients with peritoneal spread as an adjuvant following cytoreductive surgery [2]. Heated intraoperative intraperitoneal chemotherapy has been recently used as an adjuvant treatment [1]. Early postoperative intraperitoneal chemotherapy (EPIC) is an alternative to heated chemotherapy. The purpose of the study is to report two long-term survivors with ovarian carcinosarcoma treated by complete cytoreductive surgery followed by EPIC.

Case Report

Two women, 53 and 55 years old respectively, who had undergone in the past total abdominal hysterectomy with bilateral oophorectomy (the younger for benign ovarian cystic tumor and the older for endometrioid carcinoma of the corpus uteri) were referred



Fig. 1. Preoperative imaging of maximal tumor load of the younger patient.

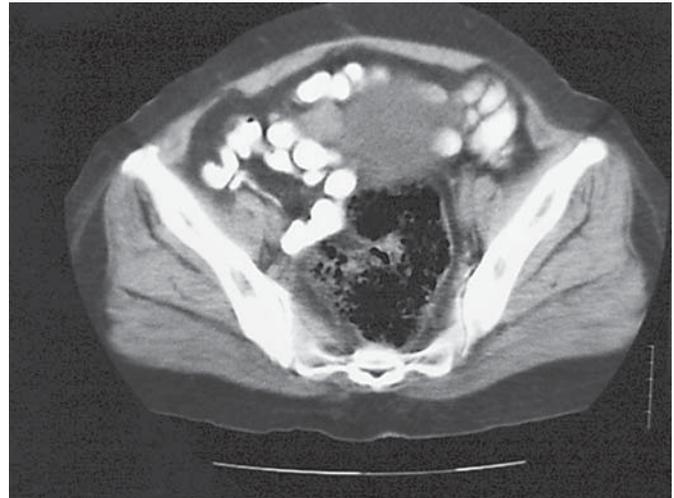


Fig. 3. Abdominal CT-scanning of the younger patient 3 years after initial cytoreduction.



Fig. 2. Preoperative imaging of tumor of the older patient located near the ileocecal valve.



Fig. 4. Abdominal CT-scanning of the older patient 2 years after initial cytoreduction.

for palpable abdominal tumors. The hematological, biochemical profiles and the chest X-rays were normal. CA-125 was moderately elevated ($= 80 \text{ ng/ml}$) in both patients. Limited peritoneal carcinomatosis without ascites was detected by abdominal CT-scan (fig. 1, 2). Biopsies taken under laparoscopy revealed ovarian carcinosarcoma. Both patients were classified as FIGO stage III. The specimens from previous hysterectomies were re-examined by another pathologist and the initial diagnoses were reconfirmed.

The patients underwent surgery with midline laparotomy and limited peritoneal carcinomatosis was found. Complete cytoreduction was possible in both patients. The first patient underwent right

hemicolecotomy – right parietal peritonectomy and greater omentectomy and the second one pelvic peritonectomy – partial resection of the small intestine – greater omentectomy and splenectomy. The patients were included in a study for ovarian carcinosarcomas with the use of doxorubicin as EPIC at a dose of 15 mg/m^2 for the first 5 postoperative days. The study was approved by the Ethics

Committee of the hospital and both patients provided a formal informed consent. The postoperative course was uneventful without complications. The diagnosis of ovarian carcinosarcoma was verified by a complete histopathologic report, which excluded the rectosigmoid, the omentum or the pelvic peritoneum as possible origin of the tumor. The patients are disease-free 2 and 3 years, respectively after surgery (fig. 3, 4).

Discussion

The prognosis of ovarian carcinosarcoma is dependent on the residual tumor [1]. Complete cytoreduction with no macroscopically visible residual tumor is the first step of the treatment. Systemic adjuvant chemotherapy seems to offer long-term survival in selected patients [2]. Various chemotherapeutic agents have been used as adjuvant systemic treatment, most of them platinum-based. The overall response rate has been approximately 20%, which is inferior to that observed in epithelial ovarian cancer. The benefit thus from adjuvant systemic chemotherapy is still unclear [3]. High-molecular weight substances (as the cytostatics) have the property to be confined for a long period to the abdominal cavity but their penetration ability is limited to 1–2 mm from the tumor surface [4]. Doxorubicin has a high response rate to all histological types of retroperitoneal and visceral sarcomas. It has been effectively used in an adjuvant setting as EPIC in retro-

peritoneal and visceral sarcoma patients [4], but also in epithelial ovarian cancer, systemically administered, in combination to other drugs.

EPIC has a few disadvantages compared to heated intraoperative intraperitoneal chemotherapy, most of them related to non-uniform drug distribution that lead to limited success. Unimpeded access of the instilled fluid is required, which is feasible by completely mobilizing the abdominal cavity with lysis of all the adhesions. Even if instillation of larger volume of fluid could partially overcome this problem, chemotherapeutic agents would still not have access to several areas of the abdominal cavity (such as the anterior abdominal wall and the areas between the bowel loops) because of gravity, that prevents the fluid from spreading and keeps it to dependent parts of the abdomen and pelvis [5]. Consequently, EPIC may be effectively used, provided that peritoneal malignancy is limited and complete or near-complete cytoreduction has been performed.

Conclusion

Complete cytoreductive surgery combined with EPIC seems to be an effective treatment in ovarian carcinosarcoma. Further studies are required though to define the value of this treatment strategy.

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