

Recurrent endometrial stromal sarcoma after treatment with high-dose chemotherapy and autologous stem-cell support: A case report

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Summary

Introduction: The efficacy of high-dose chemotherapy plus transplantation of autologous hematopoietic stem cells in patients with endometrial stromal sarcomas is unknown.

Case report: A 39-year-old woman with Stage III endometrial stromal sarcoma (ESS) underwent radical surgery, followed by five courses of ifosfamide, adriamycin and dacarbazine postoperatively. Six months after primary surgery stem cell priming was performed. Five months later bone marrow was aspirated and high-dose chemotherapy with carboplatin, vepeside and holoxan were administered after which bone marrow was retransfused. Seven years after primary surgery the patient developed an abdominal recurrence which was removed surgically and adjuvant radiotherapy was administered. One year later the patient underwent hemicolectomy because of a new recurrence infiltrating the ascending colon. Treatment with 25 mg exemestane was begun. The patient is currently alive and free of disease nine years after the initial diagnosis.

Conclusion: Aggressive chemotherapy with autologous stem-cell support seems to be ineffective in patients with ESS.

Key words: Endometrial stromal sarcoma; Treatment; High-dose chemotherapy; Stem-cell support.

Introduction

Endometrial stromal sarcomas (ESS) are rare neoplasms in premenopausal women. Treatment of ESS is primarily surgical, and a positive correlation between extent of surgery and recurrence or metastasis has been reported [1]. Recurrences develop in one-third to one-half of patients and can appear as long as 30 years after initial therapy. Conventional chemotherapy is an option to reduce the risk of recurrent or metastatic disease [2] but the efficacy of high-dose chemotherapy is unknown. We describe a patient with ESS treated with high-dose chemotherapy with autologous stem cell transplantation after radical surgical treatment who developed multiple recurrences during a 10-year-period of follow-up.

Case Report

A 39-year-old nullipara was referred for treatment of fibroid uterus and bleeding problems of three years' duration. Hysterectomy and right salpingo-oophorectomy were performed and the left adnexa was preserved. The infracolic omentum showed extensive sarcomatosis and was resected. A histological diagnosis of *high-grade endometrial stromal sarcoma Stage III* was rendered. Based on this diagnosis, a left salpingo-oophorectomy, pelvic lymphadenectomy and partial parametrectomy were performed two months later. Involvement of the left adnexa was present while 14 lymph nodes and the parametrial tissue were free of disease. Postoperatively, the patient received five courses of ifosfamide, adriamycin and dacarbazine. Six months after primary surgery stem cell priming with 5 g/m² endoxan was performed. Five months later bone marrow

was aspirated and high-dose chemotherapy administered (825 mg carboplatin on days 7, 6, 5 and 4; 1000 mg vepeside, on days 6, 5 and 4; 100 mg holoxan on days 6, 5, 4 and 3) after which bone marrow was retransfused. Subsequently, the patient was free of disease for seven years when she developed a 6-cm recurrence in the abdominal cavity. At this time, the recurrence was diagnosed as low-grade endometrial stromal sarcoma and upon review, the primary tumors were reclassified as low-grade ESS. Adjuvant radiotherapy was administered but the patient recurred within a year. Laparotomy showed an 8-cm recurrence infiltrating the ascending colon for which a right hemicolectomy was performed. Immunohistochemical staining of the primary tumor and both recurrences showed all three tumors to stain positive for estrogen and progesterone receptors and aromatase, thus treatment with 25 mg the aromatase inhibitor exemestane was begun. The patient is currently alive and free of disease nine years after the first and 11 months after the last operation.

Discussion

Multiple recurrences of ESS indicate that chemotherapy and radiation are therapeutic options for this disease, particularly after incomplete resection of primary tumors and recurrences. However, neither chemotherapy nor radiotherapy have been shown to prolong survival in patients with this disease [2, 3].

The most effective cytotoxic treatment for endometrial stromal sarcomas is unclear [1, 4, 5]. Sutton *et al.* [4] suggested that a combination containing doxorubicin should be preferred. Berchuck *et al.* [3] reported a 50% response rate to doxorubicin alone or in combination in ten patients with recurrent ESS. Partial responses were also recorded in two women treated with vincristine,

dactinomycin and cyclophosphamide or mitomycin and dacarbazine. In a small series, Lehrner *et al.* [6] postulated a synergistic effect of doxorubicin-containing chemotherapy and concomitant gestagen treatment, although three of six patients in this series developed recurrence.

The present case suggests that high-dose chemotherapy with autologous stem-cell transplantation seems to be ineffective in patients with ESS. Considering the toxicity of chemotherapy and the potential treatment success of aromatase inhibitors or GnRH analogs [7, 8], we believe that aggressive chemotherapy should be reserved for patients with ESS who progress during hormonal treatment.

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