Abstract

The case report ascribed a patient of Stage IV carcinoma ovary papillary serous cell carcinoma, who has survived this disease for past 8 years. The patient was treated with neoadjuvant chemotherapy and cytoreductive surgery followed by adjuvant chemotherapy. The patient remained disease free for 1 year thereafter, developed biochemical relapse. However, for past 8 years, the patient never achieved a complete remission and despite developing progressive disease, responded substantially to the treatment given and is leading her normal life with minimal imperilment. The patient’s long-term survival may be attributed to the favorable responses to the treatment received. The management of ovarian cancer is most impressive when tailored to the individual needs of the patient, maximizing its virtue and prolonging the patient’s survival rate. The present case may permit pragmatic acumen into the clinical management of Stage IV ovarian cancer.

Keywords: Chemotherapy, cytoreductive surgery, papillary serous cell carcinoma

Introduction

Ovarian carcinoma has the second highest incidence rate and is the fifth leading cause of cancer death in women.[1] The average lifetime risk is 1 in 70, with a median age at diagnosis of 63 years. It encamps a wide array of benign and malignant tumors with diverse histologic cell types, clinical features, and survival outcomes. The primary malignant tumors of the ovary include epithelial ovarian cancers, germ cell tumors, and sex cord tumors. Relative to its incidence, epithelial ovarian cancers have substantially high mortality and poor prognosis[2] because of lack of effective screening tools. Only 25% are detected in Stage I at the time of diagnosis. The current therapies for advanced cancer are although improving but have approached a therapeutic plateau. The platinum-based chemotherapy is indicated for patients with high risk or advanced disease. Ovarian neoplasms are highly curable if diagnosed at an early stage, but 75% present with Stage III or IV disease.[2] The 5-year survival rate declines rapidly between Stages I and IV.[1] For Stage III, it is 30%–40% and <10% for Stage IV.[1] Nonetheless, for specific and certain advanced disease patients executing tailored and individualized treatment as per the response of patients, a timely follow-up may accomplish a satisfactory therapeutic outcome. In the present case report, the step-by-step management protocol followed for a patient with Stage IV ovarian cancer who survived for >9 years is illustrated. As it is rare for a patient with advanced-stage ovarian cancer to manifest such favorable prognosis, it is anticipated that the treatment protocol may prove beneficial to clinicians encountering a similar case.

Case Report

A 52 years old female patient presented in March 2012 with chief complaints of abdominal discomfort for past 2 months. The general physical examination was done including per vaginal and per rectal examination. The per vaginal (p/v) examination revealed a nodule of 2 cm × 1 cm in the posterior fornices of the vagina. Biopsy was taken and histopathological examination (HPE) was suggestive of papillary serous carcinoma [Figure 1]. The chest X-ray was normal. Ultrasound abdomen pelvis was done which showed a large solid–cystic mass of 15 cm × 13 cm × 14 cm arising from the pelvis, and it was more toward the right side and reaching up to epigastrium. The features comprising...
After about 75% of patients have already been diagnosed with ovarian cancer, the rate and the highest mortality rate among gynecological malignancies. About 75% of patients have already reached an advanced stage at the time of diagnosis. Neoadjuvant chemotherapy (NACT) has a controversial role in overall survival rates of patients with ovarian cancer. The European Organization for Research and Treatment of Cancer (EORTC) attained clinical trial results, which supports NACT and validates improvements in survival rates for patients of carcinoma ovary. Nonetheless, the US GOG152 study and a British randomized controlled trial demonstrated no benefit in survival rates.

**Discussion**

Ovarian cancer exhibits the second highest incidence rate and the highest mortality rate among gynecological malignancies.About 75% of patients have already reached an advanced stage at the time of diagnosis. Neoadjuvant chemotherapy (NACT) has a controversial role in overall survival rates of patients with ovarian cancer. The European Organization for Research and Treatment of Cancer (EORTC) attained clinical trial results, which supports NACT and validates improvements in survival rates for patients of carcinoma ovary. Nonetheless, the US GOG152 study and a British randomized controlled trial demonstrated no benefit in survival rates.
In the present case, NACT resulted in a favorable outcome. The patient responded exquisitely to NACT. The metastatic lesions disappeared following four cycles of NACT. The patient's general condition improved significantly, which made interval cytoreductive surgery possible. An additional four courses of postoperative chemotherapy achieved complete clinical remission. Although relapse occurred 24 months after surgery, the disease was sensitive to platinum-based chemotherapy with a favorable prognosis. At this stage, the patient was considered for platinum-sensitive chemotherapy for recurrent cancer, where four cycles of combined liposomal doxorubicin second-line chemotherapy were administered. Once again, the disease was effectively controlled. Subsequently, the disease relapsed on multiple occasions and began developing resistance to chemotherapy. However, the patient’s disease was controlled effectively for a long time with appropriate modifications to the drug regimen. Eventually, the patient capitulates 8 years after the primary diagnosis. A similar kind of case was reported by Huang et al.,[8] and the patient presented with Stage IV disease and offered multiple lines of chemotherapies like in our case. Topotecan, capcitabine, nedaplatin, lobaplatin, and irinotecan were also used in combinations and managed to prolong the survival of up to 9 years. Brain metastasis in ovarian cancer is a subtle and reported in <1% of patients in autopsy cases and in 2% of clinical series. Recent series have suggested an increased incidence as chemotherapy regimens have become more effective.[9] Nonetheless, long-term prognosis is poor, as brain metastases are often a late manifestation of advanced disease, with a median survival time of <12 months. In a series of 24 patients with metastatic brain disease treated with WBRT, stereotactic radiosurgery (SRS), or a combination of WBRT and SRS, the median survival was 8.5 months.[10] Platinum sensitivity was also recently identified as an important prognostic factor in women with metastatic brain involvement from ovarian cancer.

In our case, NACT, interval cytoreductive surgery, and multiple long-term chemotherapies following surgery controlled the disease effectively. Multiple surgeries should not be considered as the standard treatment for recurrent ovarian cancer. Instead, multiple sessions of chemotherapy may be useful in the management of relapsed disease. Moreover, the patient developed lung and brain metastasis, and the reason may be the wide dissemination of disease or may be the nonadherence to the treatment, still the patient managed aggressively and also responded well. So as to conclude, the appropriate and tailored treatment should be selected on the basis of the patient’s condition in order to maximize the therapeutic efficacy and survival prolongation.

**Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

<table>
<thead>
<tr>
<th>Time following diagnosis in months</th>
<th>CA125 level before treatment, U/ml</th>
<th>Treatment</th>
<th>CA125 level following treatment, U/ml</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5000</td>
<td>Paclitaxel+carboplatin 4 cycles</td>
<td>748</td>
</tr>
<tr>
<td>4</td>
<td>748</td>
<td>Interval cytoreductive surgery</td>
<td>19.2</td>
</tr>
<tr>
<td>8</td>
<td>19.2</td>
<td>Paclitaxel+carboplatin 4 cycles</td>
<td>6.2</td>
</tr>
<tr>
<td>46</td>
<td>155</td>
<td>Liposomal doxorubicin 4 cycles</td>
<td>43</td>
</tr>
<tr>
<td>52</td>
<td>904</td>
<td>Treated with WBRT for brain metastasis followed by etoposide and procarbazine six cycles</td>
<td>53</td>
</tr>
<tr>
<td>54</td>
<td>111</td>
<td>Symptomatic treatment</td>
<td>237</td>
</tr>
<tr>
<td>70</td>
<td>1723</td>
<td>Patient developed secondary lung Re-challenged with paclitaxel+carboplatin six cycles and local RT</td>
<td>40</td>
</tr>
<tr>
<td>84</td>
<td>102</td>
<td>Oral hormonal therapy &amp; symptomatic treatment</td>
<td>100</td>
</tr>
<tr>
<td>94</td>
<td>100</td>
<td></td>
<td>914</td>
</tr>
<tr>
<td>100</td>
<td>800</td>
<td></td>
<td>456</td>
</tr>
</tbody>
</table>
Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

References