Cancer Therapy & Oncology
International Journal
ISSN: 2473-554X

Juniper Publishers
key to the Researchers

Review Article
Volume 3 Issue 2 - February 2017
DOI: 10.19080/CTOIJ.2017.03.555610

Canc Therapy & Oncol Int J

Peritoneal Surgery Plus Hipec in Patients with Advanced Ovarian Cancer; A Retrospective Review

Sonia Maciá Escalante[1], Asunción Juárez Marroquí[1], Elisa Gálvez Muñoz[1], Ajejandra Giménez Ortiz[1], Cristina Llorca Ferrándiz[1], Marina Real Panisello[2] and Bruno Camps Villata[3]

[1]*Servicio de Oncología Médica Hospital de Elda, Spain*

[2]*Servicio de Farmacia Hospital de Elda, Spain*

[3]*Servicio de Cirugía Peritoneal Hospital Clínico de Valencia, Spain*

Submission: February 07, 2017; **Published:** February 22, 2017

*Correspondence Address: Sonia Maciá Escalante, Servicio de Oncología Médica Hospital de Elda; Email: sonia.macia@pivotal.es

Abstract

Advanced ovarian cancer is one of the most lethal gynecological cancer. Although most patients experience a clinical remission after undergoing primary chemotherapy over 50% will eventually develop progressive disease. Prognosis in ovarian cancer changes depending on the surgery that was performed. Intraperitoneal chemotherapy can improve progression free survival and overall survival. This is a retrospective review of patients treated in our service with preoperative chemotherapy (carboplatin-paclitaxel) and peritoneal surgery plus HIPEC. Ten patients were included, nine had a partial response and one patient achieved complete response after induction chemotherapy. There were not any important surgery complications; HIPEC is shown as a safe treatment with good clinical results.

Keywords: ovarian cancer; peritoneal carcinomatosis; intraperitoneal hyperthermic chemotherapy

Abbreviations: PFS: Progression Free Survival; OS: Overall Survival; CTC: Common Toxicity Criteria; CR: Complete Response; PR: Partial Response; PD: Progressive Disease; SD: Stable Disease

Introduction

Ovarian cancer is one of the most lethal gynecological tumors, as most patients are diagnosed in stages III-IV. In the treatment of stage III ovarian carcinoma, optimal cytoreduction is a key point, and the prognosis depends on the performed surgery [1]. Intraperitoneal chemotherapy with hyperthermia has reported positive data in case series suggesting a benefit in progression free survival (PFS) and overall survival (OS). It can be indicated, as first therapeutic line, in patients affected by ovarian carcinoma and also in cases of tumor recurrence [2]. It may also be justified after receiving chemotherapy treatment and confirming an adequate response that allows a complete surgical resection. However, we do not yet have randomized prospective trials that demonstrate its efficacy, comparing it with standard treatment.

Platinum-based treatment regimens have shown to get more responses and to penetrate tumor tissue under hyperthermia conditions when administered intraperitoneally. Due to the plasma-peritoneum barrier, the platinum derivatives remain longer in the peritoneal cavity, thus allowing greater exposure to the drug.

Current survival increases to 45% five years after diagnosis in case series of patients with peritoneal carcinomatosis secondary to ovarian carcinoma undergoing complete resection of tumor implants (peritonectomy or resection or total removal of tumor implants and subsequent treatment with HIPEC) [3]. It should be noted that surgical resection can only be performed in medical centers with general surgery equipment that has adequate and extensive experience in the treatment of tumor processes in the abdominal cavity [4]. In order to evaluate the efficacy data of preoperative chemotherapy followed by peritoneal + HIPEC surgery, we performed a retrospective review of patients treated at our institution with this approach from January 2008 to December 2009, reviewing PFS, OS, chemotherapy regimen administered, number of cycles, and toxicity.

Patients and Methods

We reviewed our institutional databases retrospectively to identify retrospectively patients that had been treated with surgery plus HIPEC after receiving chemotherapy. These patients were treated outside a protocol at the individual discretion of the treating physician. We provide data on the patients treated

with this regimen in our hospital between January 2008 and December 2010. The aim of this retrospective analysis was to investigate the efficacy and adverse effects of this treatment in non-protocol patients with ovarian cancer. Using our databases, we identified 10 patients treated under this approach. Responses were evaluated with Response Evaluation Criteria in Solid tumors v 1.1 and serum CA125 Rustin criteria. Toxicity was assessed according to the Common Toxicity Criteria (CTC) v.3.0.

A complete response (CR) was defined as a normalization of the CA125 concentration (ie, <35 U/mL) that was maintained for at least 4 weeks. A partial response (PR) was defined as a 50% reduction in CA125 concentration that was maintained for at least 4 weeks. Progressive disease (PD) was defined as at least a 25% increase in the serum CA125 concentration for at least 4 weeks. Patients who did not meet any of these criteria were considered to have stable disease (SD). Number of administered treatment cycles prior to surgery was evaluated, as well as number of subsequent cycles, response to treatment, morbidity, and progression-free survival. The aim of the surgery was to remove all outbreaks of macroscopically visible disease of the visceral and parietal peritoneum. During surgery, peritoneal chemotherapy with hyperthermia (HIPEC) was given administering cisplatin 75 mg / m2 for 90 minutes.

Results

Ten patients (median age 63 years, range 51-73) with peritoneal carcinomatosis of ovarian origin underwent chemotherapy followed by regulated surgery + HIPEC, from January 2008 to December 2010. No postoperative complications were present and the admission had a median duration of 9 days.

Patients received a median of 5 cycles of preoperative treatment according to carboplatin AUC 6-7.5 plus paclitaxel 175 mg/m2 (range of 3 to 7 cycles). Patients had not undergone initially macroscopically completed surgery (8 patients had hysterectomy + double annexectomy + lymphadenectomy, 2 patients had only one peritoneal biopsy, because they were considered to have a high surgical risk at the time of diagnosis). Patients did not present postoperative complications, and they were evaluated in oncology consultation four weeks after the discharge. Pathological findings showed partial response in nine of them and one complete pathological response. They completed up to a total of eight chemotherapy cycles with the same regimen that had been administered prior to surgery. After surgery + HIPEC, patients presented good tolerance to chemotherapy, without adding morbidity; with the exception of neurotoxicity expected from the cumulative dose of paclitaxel (4 patients had to reduce 25% of doses in the last cycles).

Of the 10 patients, only 3 have developed progressive disease to date, at 12, 16 and 19 weeks after surgery (two at hepatic level, one with pelvic implants); rest of the patients remain free of disease. Therefore, we have not yet reached a median PFS, although we can say that with the available data, it is above the theoretically expected. Patients who progressed received second line liposomal doxorubicin. One of them, with liver progression, reached a complete clinical response after 10 cycles, and remains free of disease to date.

The other two patients received 4 and 6 cycles of doxorubicin. The patient who received 4 cycles stopped due to progressive disease, thereafter received bevacizumab-cyclophosphamide and developed a new progressive disease with death. The patient who received 6 cycles was reevaluated as a partial response and presented new progressive disease 12 weeks later, also receiving treatment with bevacizumab-cyclophosphamide stopping it after 9 cycles due to progressive disease. After this progression, patient was not candidate to receive any other active treatment and died.

Conclusion

The use of HIPEC represents a safe treatment, with capacity to improve PFS and OS. Our data suggest that cytoreductive surgery and peritoneal chemotherapy with hyperthermia are feasible and associate an acceptable morbidity in patients with peritoneal carcinomatosis of ovarian origin. In our case, it has been performed in patients who at first did not have optimal surgery, following an induction treatment with carboplatin-paclitaxel. We administered a median of 5 preoperative cycles, although the guidelines tend to recommend 4 cycles. After surgery + HIPEC, the patients presented good tolerance to the chemotherapy, without adding morbidity.

We do not have mature progression-free survival data despite the long term follow up. It would be interesting to have data from comparative studies between surgery + HIPEC followed by chemotherapy and regulated surgery followed by chemotherapy. We also need data from trials comparing HIPEC + surgery after induction chemotherapy with chemotherapy followed by interval surgery to discern how much peritoneal chemotherapy with hyperthermia actually contributes to each subgroup of patients.

Reference

1. Ozol RP (2005) Treatment goals in ovarian cancer. Int J Gynecol Cancer 15 suppl 1: 3-11.
2. Fagotti A, Costantini B, Vizzielli G, Perelli F, Ercoli A, et al. (2011) HIPEC in recurrent ovarian cancer patients: morbidity related treatment and long term analysis of clinical outcome. Gynecol Oncol 122(2): 221-225.
3. Piso P, Dahlke MH, Loss M, Schlitt HJ (2004) Cytoreductive surgery and hyperthermic intraperitoneal chemotherapy in peritoneal carcinomatosis from ovarian cancer. World J Surg Oncol 2: 21.
4. Cascales Campos PA, Gil Martínez J, Galindo Fernández PJ, Gil Gómez E, Martínez Frutos IM, et al. (2011) Perioperative fast track program in intraoperative hyperthermic intraperitoneal chemotherapy (HIPEC) after cytoreductive surgery in advanced ovarian cance. Eur J SurgOncol37(6): 543-548

How to cite this article: Sonia M E, Asunción J M, Elisa G M, Ajejandra G O, Cristina L F, et al. Peritoneal Surgery Plus Hipec in Patients with Advanced Ovarian Cancer; A Retrospective Review. Canc Therapy & Oncol Int J. 2017; 3(2): 555610. DOI: 10.19080/CTOIJ.2017.03.555610.

DOI: 10.19080/CTOIJ.2017.03.555610

How to cite this article: Sonia M E, Asunción J M, Elisa G M, Ajejandra G O, Cristina L F, et al. Peritoneal Surgery Plus Hipec in Patients with Advanced Ovarian Cancer; A Retrospective Review. Canc Therapy & Oncol Int J. 2017; 3(2): 555610. DOI: 10.19080/CTOIJ.2017.03.555610.