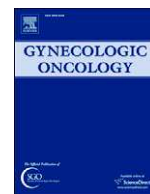




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HIPEC in recurrent ovarian cancer patients: Morbidity-related treatment and long-term analysis of clinical outcome

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ABSTRACT

Objective. To evaluate morbidity and mortality rates associated with the use of hyperthermic intraoperative intraperitoneal chemotherapy (HIPEC) after optimal cytoreduction (CRS) in a large single-institutional series of platinum-sensitive recurrent ovarian cancer patients. Moreover, disease free (DFS) and overall survival (OS) of previously studied patients have been assessed after a longer follow-up period.

Method. From May 2005 to October 2010, recurrent ovarian cancer patients with a platinum-free interval of at least 6 months have been prospectively enrolled in a protocol of CRS plus HIPEC with oxaplatinum (460 mg/m²) heated to 41.5 °C for 30 min, followed by 6 cycles of systemic chemotherapy with taxotere 75 mg/m² and oxaliplatin 100 mg/m².

Results. Forty-one patients experienced 43 procedures (CRS + HIPEC). An optimal cytoreduction was achieved in all cases (CC-0 95.3%; CC-1 4.7%). A complication rate of 34.8% was registered, with no case of intraoperative death or within 30 days after surgery. Survival curves have been calculated in a group of 25 patients with a minimum follow-up of 18 months, obtaining a median DFS and OS of 24 (range 6–60) and 38 months (range 18–60), respectively.

Conclusion. In recurrent platinum-sensitive ovarian cancer patients, the use of CRS plus HIPEC represents a safe treatment, able to significantly influence the survival rates compared to chemotherapy alone or surgery plus standard chemotherapy.

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Introduction

In the last decade, only a slight improvement has been achieved in survival rates of advanced ovarian cancer (AOC) [1], and even after optimal cytoreduction followed by platinum-taxol based chemotherapy about 60% to 70% of stage III patients develop a recurrence [2,3].

The standard treatment for recurrence is still debated. Recently, the role of cytoreductive surgery (CRS) in platinum-sensitive recurrent ovarian cancer patients has been enhanced, supported by a meta-analysis [4] proving residual tumor as the most powerful determinant of survival also in relapsed disease.

Adding hyperthermic intraoperative intraperitoneal chemotherapy (HIPEC) to the current treatment modalities for recurrent ovarian cancer seems to improve survival rates in some series at the cost of acceptable mortality, but significant morbidity rates [5–7]. However, most of the studies testing the combined approach are observational and have been conducted in inhomogeneous series. Thus, the evidence

supporting the performance of CRS + HIPEC is still poor, as well as it is unclear which patient will benefit most from this treatment.

In a previous pilot study we carried on between 2005 and 2008, we obtained encouraging data in 25 recurrent platinum-sensitive ovarian cancer patients [8] submitted to CRS + HIPEC, but the low number of cases and the short follow-up did not allow us to draw any definitive conclusion. Based on these considerations, we kept on treating this subset of patients according to this schedule.

Primary objectives of the present study were the following: i) to re-assess morbidity and mortality rates associated to oxaliplatin (OXA)-based HIPEC after optimal cytoreduction in a larger single-institutional series of recurrent ovarian cancer patients, and ii) to recalculate disease free (DFS) and overall survival (OS) of the previously studied patients after a longer follow-up period.

Patients and methods

This is a single-institutional study planned to evaluate the role of the oxaliplatin-based HIPEC associated with optimal CRS and followed by systemic administration of docetaxel (DTX) and OXA in recurrent platinum-sensitive ovarian cancer patients. The approval of the local ethic committee was obtained before starting the trial.

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