

Review

Advanced cytoreduction as surgical standard of care and hyperthermic intraperitoneal chemotherapy as promising treatment in epithelial ovarian cancer

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Abstract

Favorable oncological outcomes have been reported in several trials with the introduction of Cytoreductive Surgery (CRS) and Hyperthermic Intraperitoneal Chemotherapy (HIPEC) in the treatment of Advanced Epithelial Ovarian Cancer (EOC). However most of the studies testing the combined approach are observational and have been conducted in inhomogeneous series so that the evidence supporting the performance of this combined treatment is still poor. Median Overall and Disease Free Survivals of up to 64 months and 57 months, respectively have been reported. Although a rate of morbidity of up to 40% has been observed in some series the CRS + HIPEC continues to gain an increased popularity. Several prospective randomized trials are ongoing using the procedure in various time points of the disease.

In this review several issues such as the impact of cytoreduction and residual disease (RD) on outcomes as well as the role of HIPEC will be updated from the literature evidence. Some controversial points HIPEC related will also be discussed.

Recent experiences regarding the introduction of a more aggressive surgical approach to upper abdomen to resect peritoneal carcinomatosis (PC) allowed increased rates of optimal cytoreduction and has demonstrated an apparent better outcome. This evidence associated with the positive results phase III trial testing normothermic intraperitoneal as first-line chemotherapy is guiding some investigators to propose the CRS + HIPEC in the primary setting. Several prospective phase II and III trials have recently been launched to validate the role of the combined treatment in various time points of disease natural evolution.

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Introduction

Epithelial ovarian cancer (EOC) is one of the most common gynecologic malignancies and the fifth most frequent cause of cancer death in women.¹ Most patients have widespread disease at presentation.² The conventional clinical approach for advanced EOC is based on CRS followed

by adjuvant chemotherapy. Clinical studies have shown that cisplatin/taxol-based first-line chemotherapy achieves the highest response rates, with a high proportion of complete responses.^{3,4} However, about 2 thirds of the patients relapse and ultimately die of chemoresistant disease.

The role of cytoreductive surgery and residual disease (RD)

A prominent meta-analysis supporting the importance of CRS in the treatment of EOC was published by Bristow

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