

## THE TREATMENT OF PERITONEAL CARCINOMATOSIS FROM COLONIC CANCER AND PSEUDOMIXOMA PERITONEI BY CYTOREDUCTION AND HYPERTHERMIC ANTIBLASTIC PERITONEAL PERFUSION (HAPP)

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### Introduction

Peritoneal carcinomatosis may present as synchronous disease or like evolution of colonic cancer and in pseudomyxoma peritonei (PMP). Peritoneal carcinomatosis has been treated with poor results both with surgery or systemic chemotherapy. Surgical cytoreduction, peritonectomy and hyperthermic antiblastic peritoneal perfusion (HAPP) seems to be effective in the treatment of carcinomatosis from colonic cancer and PMP. In fact peritoneal cavity should be considered a “pharmacological sanctuary” for the presence of the peritoneal-plasmatic barrier. Considering those features, an high concentration of cytostatic drugs should be carried into the tumor area, with mild side-effects. The techniques to perform the HAPP are three: “closed”, “open” and “semiclosed”; we'll describe the semiclosed one.

### Materials and Methods

Peritoneal perfusion is effective only if preceded from a complete cytoreduction. The techniques of “centripetal” aggression of tumor have been codified. They are known as peritonectomy procedures. Six different techniques of peritonectomy are described: 1) Epigastric peritonectomy, 2) Central peritonectomy 3) Right diaphragmatic peritonectomy, 4) Left diaphragmatic peritonectomy, 5) Lesser omentum peritonectomy, 6) Pelvic peritonectomy. Peritonectomies are varying combined with resections of viscera involved by neoplastic nodes. In semiclosed technique, the abdominal wall is partially closed and hanged to an autostatic retractor, only the central part of the incision remains open. Through this small opening, the surgeon can mix the perfusate solution and check what happens in the abdomen. From October 1995 to January 2006 we performed 181 HAPP. In those 181 cases, the peritoneal carcinomatosis arose from colorectal cancer in 36 cases; from PMP in 44 cases. About colonic cancer, in 23 patient we used Cisplatinium 100 mg/sm plus C-Mitomycin 16 mg/sm for 60 minutes, at 41,7°C; in 11 cases we used folinic acid 20 mg/sm plus 5-FU 400 mg/sm associated to peritoneal administration of Oxaliplatinium 460 mg/sm for 30 minutes at 41°C. 2 patients have been treated with C-Mitomycin 35mg/sm for 60 minutes at 40,5°C, because of heavy side effect from systemic chemotherapy with platinum. About the 44 PMP, 3 patients have been treated in 2 steps, and one patient in 3 steps. 42 patients were treated with Cisplatinium 100 mg/sm plus C-Mitomycin 16 mg/sm for 60 minutes at 41,7°C. 2 patients have been treated with C-Mitomycin 35mg/sm for 60 minutes at 40,5°C.

## Results

-Colonic cancer: in the 36 patients who underwent cytoreduction + H.A.P.P., morbidity rate was 28,8% and in 5 cases was necessary a re-intervention. Perioperative mortality was 2,8 %. About the 23 patients treated with CDDP and C-mytoposin, the results were not very satisfactory, with a median survival time of 14,5 months, lower than we expected. So we treated the last 11 patients with oxaliplatin and select patient with PCI lower than 15. The results seem to be encouraging even not statistically evaluable. -PMP: 17 patients (38 %) presented perioperative complications that in 4 cases required the reoperation of the patient. We not registered perioperative mortality. The 81 % of the patients are without evidence of disease at a follow up with a range of 1-120 months.

## Conclusions

In literature, complete cytoreduction associated to HAPP permits encouraging results in the treatment of peritoneal carcinomatosis from colonic cancer. In our opinion, those results could be achieved if there is a correct selection of the patients associated to a complete cytoreduction with no residual macroscopic disease. The employment of new drugs in HAPP may consent to improve those results. About PMP, an aggressive cytoreduction combined to HAPP with Cisplatin plus C-Mitomycin seems to be, by now, the treatment that permits to obtain the best results, with long disease free interval in more than 80 % of the patients treated.