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Laparoscopic HIPEC for Peritoneal Carcinomatosis from Gastric Cancer – Technique and Early Outcomes of Our First Cases

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Abstract

Gastric cancer remains one of the most aggressive malignancies, being associated with very poor therapeutic outcomes, especially in the advanced disease patients. Due to this evidence, finding a better treatment, a better control and higher survival rates is the current scientific focus of the medical community. Once the benefits of cytoreductive surgery in association with intraperitoneal hyperthermy (HIPEC) have been widely demonstrated in patients presenting peritoneal carcinomatosis from colorectal or ovarian origin,attention was focused on the possible benefit of this method in patients diagnosed with peritoneal carcinomatosis with gastric origin. Moreover, using laparoscopy for the cytoreductive surgery (L-CRS) and hyperthermic intraperitoneal chemotherapy (L-HIPEC), the advantages of minimal invasive surgery (MIS) are expected to contribute to improved postoperative outcomes. In this way, the patients benefit from a faster administration of the adjuvant chemotherapeutic treatment, whenever is necessary.

Aim: to present the technique of L-CRS + L-HIPEC and the early therapeutic outcomes in a case series of two patients diagnosed with peritoneal carcinomatosis from gastric cancer.

Method: A complete investigational work-up including diagnostic laparoscopy to evaluate the Peritoneal Carcinomatosis Index (PCI) was fulfilled in all the cases. The institutional Tumor Board decided the therapeutic strategy: laparoscopic radical resection and HIPEC (L-CRS +L-HIPEC). The procedures were performed into a private setting (Ponderas Academic Hospital).

Results: Two male patients,46 and 69years old, presenting carcinomatosis from gastric cancer were included into the study. Initial PCI was assessed by laparoscopy and it was 18 and 7, respectively. Both cases underwent neoadjuvant chemotherapy. D2 laparoscopic radical gastrectomy and L-HIPEC was then performed. Time of procedure was360 and 320 minutes, respectively. The intraperitoneal temperature varied between 41 and 42°C, while the intra-esophageal temperature reached a maximum value of 37,7°C. There was no perioperative or postoperative complication, nor mortality. The hospital stay was 8 days.

Conclusions: Explorative laparoscopy can help select patients for conversion chemotherapy in the setting of high peritoneal carcinomatosis index (PCI) score. Laparoscopy radical excision + L-HIPEC were successfully performed with very good therapeutic outcomes.

Key words: HIPEC, peritoneal carcinomatosis, gastric cancer, debulking surgery, laparoscopy