



Advanced Abdominal and Thoracic Malignancies. Cytoreduction and Cavity Hyperthermic Chemoperfusion Treatment

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Editorial

Since the end of 90' there has been an increasing applying of peritoneal cavity chemo-Hyperthermic Perfusion (HIPEC) to treat peritoneal carcinosis is from abdominal solid tumours. Following the pioneering experience of Paul Sugarbaker, more than 200 world-wide Centers now treat selected cases of PC from Ovarian, Gastric, Colon, Pseudomyxoma peritonei tumours and those coming directly from the peritoneal serosa, Mesothelioma. Hipec is a suitable and logical option particularly following complete (absence of residual tumour) or optimal (residual tumour less than 2.5 mm in diameter) cyto reduction and it has the goal of killing those Peritoneal Free Cancer Cells (PFCCs) present at the end of the surgical tumour removal in more than 75% of cases. Results from thousands of publications and cytatations in literature demonstrates that in presence of limited peritoneal carcinosis [1,2] but even in more selected diffused cases the advantage of the treatment combination, Complete cyto reduction and Hipec, is clear in more than 40% of cases, reaching long term survival and even definitive cure in lots of patients. Complete resection of coexistent hepatic metastases doesn't impact on successful rates [3].

Strict exclusion criteria for curative HIPEC are miliary diffused peritoneal metastases and extra-abdominal metastases (Bone, Brain, Lung)[1,2]. After the first procedure, recurrence of tumour is frequent (about 50% of cases) and are still located into the peritoneal cavity in 45% of cases, particularly in case of ovarian, pseudomyxoma and colonic primary tumours. To repeat the procedure in these cases allows a success rate in 35-45% of patient resembling the same outcome after the first procedure [4]. Another very captivating indication for HIPEC is prevention of peritoneal carcinosis and even hepatic metastases, in those tumours at risk of metastases. Based on pivotal studies from Asiatic Group's experience. HIPEC has been administered after radical surgery for T3-4 advanced gastric cancer with good results [5,6]. With the same rationale in 2021 it will be finish a randomized study from European Groups approaching the question of Hipec or not after curative gastric cancer surgery [7]. Randomized studies for gastric and ovarian cancers are now on going with definitive result coming soon. In practice the supposed high complication rate after these procedures is the main reason why these procedure are not still fully applied world-wide. CRS is associated with significant morbidity and low mortality rates. Intraperitoneal heated chemotherapy (HIPEC) may cause additional morbidity and toxicity. Changing the intraoperative chemotherapy protocols may be associated with an increased morbidity. However, postoperative complications are mainly associated with the extent of surgery and the performed surgical procedures. In the literature morbidity rates range from 23% to 45% depending on the assessment and definition of perioperative complications. Complication's rate are mainly dependent on the skill of the Center. Growing experiences demonstrate that the more volume of treatment a Center produces the less complication's rate is obtained [8]. A palliative role for Hipec has been explored in case of persistent untreatable malignant ascitis (MA). Literature on the use of laparoscopic HIPEC in MA refers only on small numbers of patients, but all showing successful control of ascites. It is a beneficial treatment for the management and palliation of refractory MA and results are excellent with complete resolution observed in many patients [9]. Similarly, recent experiences have been made with hyperthermic chemoperfusion of the pleuralcavity. In case of pleural mesothelioma, lung, breast, ovarian tumors involving the pleura and even chronic pleural fluid collection, an Hyperthermic Thoracic Cavity Chemoperfusion (HITHOC) was given to the patients. Those who received HITHOC had significantly longer median survival length compared to the patients without HITHOC. This is a procedure that can be applied in some caseeven with a mini-invasive approach, thoracoscopy, and a more extensive indications for this treatment is expected here after [10].

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Received Date: 18 Jan 2018

Accepted Date: 22 Jan 2018

Published Date: 24 Jan 2018

Citation:

Pasqual E, Bacchetti S. Advanced Abdominal and Thoracic Malignancies. Cytoreduction and Cavity Hyperthermic Chemoperfusion Treatment. *Clin Surg*. 2018; 3: 1895.

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Peritoneal and pleural cavity hyperthermic chemoperfusion following R0, CCO surgical cytoreduction need high level of expertise with an ideal learning curve exceeding 100 cases treated. Therefore dedicated multidisciplinary team services, made by surgeons, radiotherapists, oncologists, radiologists, perfusionists and pathologists are now being offered in many third referral Hospital worldwide. It seems reasonable therefore to promote world-wide institution of Surgical oncological Units dedicated to the treatment of relapsing or metastatic disease from abdominal and chest tumors.

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