

Assessment of clinical benefit and quality of life in patients undergoing cytoreductive surgery and hyperthermic intraperitoneal chemotherapy for management of peritoneal carcinomatosis

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Peritoneal carcinomatosis (PC) is a challenging problem with poor prognosis. Survival even with the current standard chemotherapy is dismal. Cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC) in appropriately selected patients may offer significant survival benefit. In the review article entitled “*Assessment of Clinical benefit and quality of life in patients undergoing cytoreductive surgery and hyperthermic intraperitoneal chemotherapy for management of peritoneal carcinomatosis*” authors provide a comprehensive review of the available data related to the morbidity, mortality, survival and quality of life with CRS and HIPEC for the management of peritoneal carcinomatosis (1).

Several retrospective studies have shown the feasibility and benefit of CRS and HIPEC in the management of various peritoneal surface malignancies (2,3). Although clinical utility of CRS and HIPEC in the management of mesothelioma and peritoneal dissemination of appendiceal malignancies is widely accepted, its role in colorectal cancer peritoneal carcinomatosis has been heavily debated. Randomized controlled trial by Veerwal *et al.* demonstrated a survival benefit of 9 months for patients with colorectal peritoneal carcinomatosis treated with CRS and HIPEC followed by 5-FU chemotherapy compared to palliative surgery and 5-FU chemotherapy (4). Furthermore, patients who underwent complete cytoreduction had a 5-year survival rate of 45%, which favorably compares to the reported survival for colorectal hepatic metastasectomy. Despite these promising results skepticism still exists, as the patients in the control arm of the trial did not receive current standard chemotherapy. However, recent studies utilizing current standard chemotherapy with or without biologic agents have reported a median overall survival

of 10-15 months in patients with colorectal peritoneal carcinomatosis (5,6). These results underscore the decreased efficacy of systemic treatment in the setting of PC, when feasible CRS and HIPEC should be considered as the standard treatment for patients with colorectal cancer peritoneal carcinomatosis.

As described in the review article cytoreductive surgery is a major surgical procedure with significant morbidity. However, in appropriately selected patients the risk-benefit ratio favors an aggressive treatment approach. Extent of peritoneal dissemination, measured as peritoneal cancer index (PCI) and the completeness of cytoreduction have been indisputably shown to be major predictors of outcome (7). Patient selection is a challenging task, as the risk-benefit ratio is influenced by multiple factors. In addition, the ability to accurately estimate the extent of peritoneal dissemination and predicting the chances of complete cytoreduction is far from perfect. Esquivel and Pelz have proposed a peritoneal surface disease severity (PSDS) scoring system based on symptoms, extent of disease and histology to stratify patients with colon cancer peritoneal carcinomatosis into different prognostic groups that may aid in patient selection for different treatment (8). The risk-benefit ratio for CRS and HIPEC not only depends on the ability to achieve complete cytoreduction but on the biologic aggressiveness of the tumor, which is heavily weighed into the PSDS score. Multi-institutional prospective validation studies are required to assess the clinical utility of the PSDS scoring system.

Finally, the importance of measurement of health related quality of life (HRQoL) cannot be overemphasized in patients undergoing CRS and HIPEC. The authors

have provided a comprehensive review of the available scoring systems and the data for QoL. Most studies report a decrease in the quality of life up to six months after CRS and HIPEC, with improvement in majority of patients at one year. This should be taken into consideration while counseling patients about the outcomes of CRS and HIPEC.

In summary, management of patients with peritoneal carcinomatosis is complex and requires a multidisciplinary approach. Proper patient selection for CRS and HIPEC based on favorable risk-benefit ratio is of utmost importance. Management should focus on both cancer-specific outcomes and quality of life.

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