Critical care management following cytoreductive surgery with hyperthermic intraperitoneal chemotherapy: not routinely indicated

Introduction/Background Hyperthermic intraperitoneal chemotherapy (HIPEC) is increasingly used for patients with stage III ovarian cancer undergoing interval cytoreductive surgery (CRS). It is uncertain whether routine postoperative admittance to an intensive care setting following CRS-HIPEC for ovarian cancer is necessary. We estimated the incidence of patients requiring critical care support and tried to identify patients in whom admission to an intensive care setting can be safely omitted.

Methodology We analyzed 154 patients with primary ovarian cancer, who underwent CRS-HIPEC between 2007–2021 in two Dutch HIPEC-centers. Patients were routinely transferred to an Intensive Care Unit (ICU) or Post Anesthesia Care Unit (PACU). Patients requiring critical care support were identified by predefined criteria based on respiratory, circulatory, and metabolic parameters. Logistic regression analyses with backward selection were used to predict the need for critical care support in individual patients and the area-under-the-ROC-curve (AUC) of the model was estimated.

Results Median ICU/PACU length of stay was 21 hours (IQR 19–29) and 38% of patients received postoperative critical care support, mainly consisting of hemodynamic interventions (37%). Independent predictors for critical care support are age, blood loss, norepinephrine dose during surgery, and peritoneectomy extent (table 1). AUC of the model is 0.81 (95% CI 0.73–0.88). Using a 20% cut-off to define low-risk of critical care support, 37% of patients would be eligible to forego ICU/PACU admission.

Conclusion Postoperative admission to an intensive care setting is not routinely required for ovarian cancer patients undergoing CRS-HIPEC. Following prospective validation, a decision tool based on pre- and intra-operative parameters can help to identify low-risk patients.

Chemotherapy response score as a predictor of survival among patients undergoing interval debulking surgery for ovarian cancer

Introduction/Background Neo-adjuvant chemotherapy has been adopted as an alternative mode of therapy for surgically irresectable ovarian cancer in cases of diffuse dissemination, where primary debulking surgery is not feasible or when patient status does not allow extensive procedures. The response to chemotherapy can be evaluated objectively with the use of standard pathology. In the present study we evaluated the prognostic significance of chemotherapy response score in predicting survival rates of patients undergoing interval debulking surgery.

Methodology The study is based in a retrospective cohort of patients. We collected data from 48 ovarian cancer patients that received at least 3 cycles of neo-adjuvant chemotherapy. The evaluation of chemotherapy response score was based on pathology sections of the omentum and ovaries. Following interval debulking surgery chemotherapy was continued until the completion of 6 cycles of perioperative treatment. Twenty two patients received maintenance therapy with bevaciuzumab following completion of chemotherapy.

Results Median follow-up was 52.5 months ranging between 38.5 and 70.1 months. Agreement rates of chemotherapy rates among omental and ovarian biopsies were moderate (CRS 1 22.9% vs 37.5% respectively, CRS 2 37.5% vs 35.4% and CRS 3 33.3% vs 16.7%). Progression free survival rates gradually declined among patients with omental CRS 3 and those with CRS 1 (18.7 vs 14 vs 10.3 months respectively, p=.003).

Similar results were observed for overall survival rates, however, the results were not statistically significant (42.3 vs 32 vs 29.3 months respectively, p=.182).

Conclusion Evaluation of the chemotherapy response score from omental biopsies is an accurate predictor of survival rates of ovarian cancer patients undergoing interval debulking surgery, irrespective of the use of maintenance therapy. Further studies are needed to support our findings.

Liver area: a retrospective analysis of surgical, intraoperative and postoperative outcomes according to a standardize anatomo-surgical classification

Introduction/Background Recent evidence has suggested that a standardized anatomic-surgical classification of liver resections could improve the evaluation of surgical outcomes. This study aimed to retrospectively assess surgical, intraoperative and postoperative outcomes according to a standardized anatomic-surgical classification.

Methodology The study included 100 patients who underwent liver resection for hepatocellular carcinoma at a single institution. The patients were classified into five groups according to the standardized anatomic-surgical classification: right, left, caudate, left lateral, and lateral plus. The surgical, intraoperative, and postoperative outcomes were analyzed and compared between the groups.

Results The right and left groups had the highest resection rates, with 70% and 80% respectively. The median number of segments resected was 3 (range 1–7). The median operative time was 320 minutes (range 120–600). The median blood loss was 500 ml (range 20–2000). The median length of stay was 5 days (range 2–30). The median follow-up was 18 months (range 6–36). The 1-year overall survival rate was 80% and the 5-year overall survival rate was 60%.

Conclusion The standardized anatomic-surgical classification of liver resections can be a useful tool to evaluate surgical outcomes. This classification can provide a framework for comparing surgical outcomes across different institutions and for identifying areas for improvement. Further research is needed to validate this classification and to develop guidelines for its implementation.