

Bloodless HIPEC: No Blood, No problem. Implementation of a pilot protocol in Jehova's witness

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Introduction: Jehovah's Witness (JW) patients are a vulnerable patient representing a unique intraoperative ethical and legal dilemma. CRS/HIPEC is oftentimes associated with major hemodynamic and metabolic changes that may lead to challenges in fluid and blood management.

Methods: We propose a successful enhanced recovery (ERAS) pathway including perioperative management using a bloodless protocol. Postoperative morbidity, mortality, and overall survival were analyzed.

Results: 3 male patients (ages 22, 31, and 45) underwent extensive CRS/HIPEC for peritoneal carcinomatosis secondary to colorectal cancer. ERAS protocol was established for fluid maintenance and minimization of hemodilution. Tight hemodynamic control including EBL, urine output, and intrabdominal temperature monitoring was performed. Mannitol IV infusion 45 minutes prior to HIPEC was used. Arterial blood gases were drawn hourly and coagulation studies were followed for 24 hours after completion of CRS/HIPEC. All patients were extubated on POD 1. Median ICU and hospital stays were 2.5 and 7.5. Mean peritoneal cancer index was 14, two patients achieved completeness of cytoreduction score of 0. Two had no postoperative complications, while one patient was re-hospitalized due to intraabdominal bleeding and hematoma. Median follow up was 15 months and 1-year overall survival rate was 100%.

Conclusion: ERAS pathways using bloodless protocol aiming at minimizing hemodilution seems to be feasible in JW patients undergoing CRS/HIPEC. Tight hemodynamic control and normothermia are paramount in avoiding major physiological changes. Careful patient selection and detailed informed consent are key steps in this process.