

Blood salvage use in gynecologic oncology

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BACKGROUND: Blood salvage allows for collection and processing of surgical blood loss with the eventual reinfusion of washed red blood cells (RBCs) back to the patient. The use of blood salvage in patients undergoing surgery for malignancy is off-label. Controversy exists as to the risk of potential cancer dissemination resulting from the reinfusion of the processed blood, but no data are available to confirm this risk. Recent studies have demonstrated that filtering the salvaged blood using a leukoreduction filter (LRF) significantly decreases the number of cancer cells in the recovered RBC aliquot in a variety of cancer types.

STUDY DESIGN AND METHODS: Patients on the gynecologic oncology service as part of the bloodless surgery program at Englewood Hospital and Medical Center from April 1998 to April 2007 were identified. Three patients that had reinfusion of cell salvage blood (all reinfusions were performed after filtration with a LRF) were studied further with emphasis placed on long-term outcomes.

RESULTS: Two of the three patients did not show any evidence of metastases after surgery. The only patient that developed evidence of hematogenous progression had known liver metastases at the time of her initial diagnosis and therefore had hematogenous dissemination before her index surgery.

CONCLUSION: In this series of patients undergoing surgery for malignancies on the gynecologic oncology service, blood salvage with LRF was not definitively associated with hematogenous dissemination. Further large controlled studies are needed to demonstrate the clinical safety of the use of blood salvage in this setting.

Blood management optimizes outcomes in patients undergoing surgical procedures who wish to avoid allogeneic transfusion.¹ Blood management is the philosophy to improve patient outcomes by integrating all available techniques to reduce or eliminate allogeneic blood transfusions. It is a patient-centered, multidisciplinary, multimodal, planned approach to patient care.² Using a series of interventions and management strategies related to this goal, patients who were previously considered extremely high risk or inoperable without a blood transfusion can now undergo complex surgical procedures with acceptable outcomes.³

Blood salvage (also known as intraoperative autologous blood collection with autotransfusion, or cell saver) is one of the techniques utilized in blood management, which allows for collection and processing of surgical blood loss with the eventual reinfusion of this blood intravenously (IV) into the patient.¹ In certain circumstances, blood salvage may be necessary to prevent life-threatening consequences of severe blood loss anemia during surgery in patients that refuse allogeneic transfusion (e.g., Jehovah's Witness patients). Preoperative counseling is critical in utilizing blood management techniques, and recently we demonstrated that blood salvage (when used in a continuous circuit with the

ABBREVIATIONS: CT = computed tomography;
LRF(s) = leukoreduction filter(s).

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