

## **BLOOD MIXTURE AND THE DANGER OF DISCHARGE IN PATIENTS EXPERIENCING HEART MEDICAL PROCEDURE WITH EXTRACORPOREAL DISSEMINATION**

**Manuel Luque Oliveros**

University of Sevilla, Spain

**Purpose:** Patients undergoing cardiac surgery with extracorporeal circulation (ECC) frequently present haemorrhages as a complication associated with high morbidity and mortality. One of the factors that influences this risk is the volume of blood infused during surgery. The objective of this study was to determine the optimal volume of autologous blood that can be processed during cardiac surgery with ECC. We also determined the number of salvaged red blood cells to be reinfused into the patient to minimize the risk of haemorrhage in the postoperative period.

**Methods:** This was an observational retrospective cross-sectional study performed in 162 ECC cardiac surgery patients. Data regarding the sociodemographic profiles of the patients, their pathologies and surgical treatments and the blood volume recovered, processed, and reinfused after cell salvage were collected. We also evaluated the occurrence of postoperative haemorrhage.

**Results:** The volume of blood infused after cell salvage had a statistically significant effect ( $p < 0.01$ ) on the risk of post-operative haemorrhage; the receiver operating characteristic sensitivity was 0.813 and the optimal blood volume cut-off was 1800 ml. The best clinical outcome (16.7% of patients presenting haemorrhages) was in patients that had received less than 1800 ml of recovered and processed autologous blood, which represented a volume of up to 580 ml reinfused red blood cells.

**Conclusion:** The optimum thresholds for autologous processed blood and red blood cells reinfused into the patient were 1800 and 580 ml, respectively. Increasing these thresholds augmented the risk of haemorrhage as an immediate postoperative period complication.

## **BIOGRAPHY**

Manuel Luque Oliveros is attached to the surgical block of the University Hospital Virgen Macarena and Associate Professor in the Department of Nursing, Spain. He is Doctor by the University of Sevilla, with international research awards to his credit, and more than 200 publications in which high impact magazine is found.

[mлуque5@us.es](mailto:mлуque5@us.es)



Note: