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EFFECTS OF BLOOD MANAGEMENT AND HEMATOCRIT THRESHOLD ON CLINICAL OUTCOME

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Although there is a decline in allogenic blood transfusion reactions such as viral and bacterial infections, there are still many obstacles that make this an inefficient method of blood donation to surgical patients. Cost, RBC and factor integrity, and overall blood shortages are increasing variables that should be taken into consideration before administration of allogenic donor blood products be considered. Autologous donor blood would be a more desirable form of replenishment of RBC's during perioperative procedures in lowering the risks as it is the patient's own blood. Average allogenic donor blood is typically 20-40 days old. Red cell viability is questionable due to decreased pH, buildup of lactic acid, decrease in 2-3 DPG, decrease in glucose consumption, and decrease in ATP. It is believed, these units, unprocessed (unwashed) are administered may impact undesirable outcomes. Studies have shown that autologous donor blood that can be returned to the patient immediately following post-operative procedures have higher hematocrit levels. This increase HCT will inevitably impact an increase in tissue perfusion. Because of the quality of the blood (high DPG), an increase in tissue oxygenation should not be overlooked. RAP, pre-donation (autologous donor blood) and cell washing donor all should contribute to a better and more positive outcomes of a cardiac patient undergoing Cardiopulmonary Bypass. This study involves hematocrit testing at 12 and 24 hours post-operative periods, length of stay, ventilation times and etc. It is postulated that the administration of autologous blood immediately following procedure will lead to an increase in hematocrit and decrease in length of hospital stay. There will be an even greater increase in hematocrit post op and even greater decrease in hospital stay if RAP is utilized.