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ASSESSMENT OF HEMOCOR HEMOCONCENTRATOR IN CONTRAST MEDIA CLEARANCE

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Diagnostic procedures with radiocontrast agents are often associated with adverse chemotoxic and idiosyncratic reactions. In fact, contrast media has become the third leading cause of hospital-acquired acute renal failure (ARF). Realizing that hemoconcentration results in better survival of patients with ARF after cardiac surgery, we conducted a series of ex vivo experiments with Hemocor HPH®1400 (Minntech Corp.) to evaluate its usefulness in Optiray®350 (Ioversol Injection 74%; Mallinckrodt Inc., St. Louis, MO) clearance from saline, human albumin, packed RBC and whole human blood. All experiments mimicked a 2 hr cardiopulmonary bypass, scaled down to a 1 L model, using standard blood and ultrafiltrate flow rates with sampling times at: 0, .25, .5, 1 and 2 hrs. Hemocor showed to be highly biocompatible with all blood components. After 30 min of dialysis, the Optiray level was reduced by 99.8% y=674.4 * x^1.932 R^2=0.991) in saline, 96.2% (y=615.2 * x^1.920 R 2=0.993) in albumin, 97.8% (y=645.4 * x^1.926 R 2=0.992) in RBC, and 84.7% (y=530.5 * x^1.898 R^2=0.993) in whole blood. Optiray was not detectable at the 1 hr interval in all tested solutions. This data indicates that Hemocor can be an effective therapeutic strategy in preventing contrast-induced toxicity.