**COMPARISON OF THE HEMODYNAMIC EFFECTS OF A ROOM TEMPERATURE AND WARM 4% ALBUMIN FLUID BOLUS AFTER CARDIAC SURGERY**

**Introduction:** Fluid bolus therapy (FBT) performed with room temperature colloids is widely used to treat hemodynamic instability after cardiac surgery. However, little is known of the effects of FBT with near body temperature (warm) 4% albumin.

**Objectives:** Compare key hemodynamic variables after warm 4% albumin FBT, compared to room temperature FBT, after cardiac surgery.

**Methods:** In this single-centre prospective observational study, we included 12 adult patients admitted to the ICU after cardiac surgery, and prescribed FBT for the treatment of hemodynamic instability. Patients received a 500 mL 4% albumin FBT, either warmed at 40°C by a fluid warmer to ensure near body temperature at delivery (intervention, n=6), or at room temperature (control, n=6). Cardiac index (CI), mean arterial pressure (MAP) and blood temperature were recorded before, and at 0 and 30 minutes after FBT. Ventilation and intravenous drugs were kept unchanged during the observation period.

**Results:** All patients (median age: 71 years, IQR [64; 77]) were mechanically ventilated and 4 required vasopressor support. FBT was administered to treat hypotension (n=8), low CI (n=3) or low filling pressures (n=1). In each study group, CI and MAP significantly increased at 0 and 30 minutes after FBT, compared to baseline. CI did not significantly differ between intervention and control at 0 minutes (0.4 [0.3; 0.6] vs. 0.5 [0.2; 0.5] L/min/m2), and at 30 minutes (0.4 [0.3; 0.5] vs. 0.3 [0.2; 0.5] L/min/m2). Likewise, no significant difference in MAP between groups was observed at 0 minutes (variation from baseline: 6 [4; 7] vs. 12 [6; 15] mmHg), and at 30 minutes (7 [-2; 9] vs. 5 [1; 11] mmHg). Blood temperature was significantly lower in the control group, compared to the intervention (p<0.01).

**Conclusion(s):** Warm FBT prevents FBT-induced decreases in body temperature while delivering equivalent hemodynamics effects to room temperature after cardiac surgery.