**HAEMODYNAMIC TOLERANCE OF CARDIAC SURGICAL PATIENTS RECEIVING VASOACTIVE THERAPY IN UPRIGHT POSITIONING**

**Introduction:** There is a lack of consensus regarding when it is safe to commence exercise with cardiac surgical patients in the Intensive Care Unit (ICU) receiving vasoactive therapy. Patients receiving vasoactive therapy may therefore be subject to unnecessary bed rest.

**Objectives:** The aims were to measure the effect of exercise in upright positioning on haemodynamic parameters of cardiac surgical patients receiving vasoactive therapy, to clarify what level of vasoactive medication may allow safe exercise, and determine the incidence of adverse events.

**Methods:** This was a prospective, single-centre, cohort study conducted in the ICU of a cardiothoracic tertiary, university-affiliated hospital in Australia. Eligible participants were recruited from August 2017 to May 2018. The Flotrac-Vigileo system was utilized to obtain haemodynamic measurements. Subjects were progressively positioned from supine, standing and marching on spot and returned to supine. A between-within repeated measures ANOVA was conducted to compare haemodynamic variables over various positions and interactions with positions and dose of low vs medium to high levels of vasoactive medication.

**Results:** 20 participants; 16 (80%) male; mean age of 65.9 (10.6) years; were studied, with 6 (30%) receiving low dose vasoactive medication and 14 (70%) receiving a moderate to high dose. There were significant increases in mean arterial pressure (MAP) (p=0.018), heart rate (HR) (p=0.050) and respiratory rate (RR) (p=0.049) with upright positioning. There was no significant interaction between position and dose. There were no significant changes in cardiac output, stroke volume or cardiac index during upright positioning. One minor adverse event occurred in a participant on low dose Dopamine. This was a transient decrease in MAP.

**Conclusions:** Exercise caused an increase in MAP, HR and RR, and led to no significant increases in other hemodynamic parameters. Our findings suggest that vasoactive therapy alone should not be considered a contraindication to exercise post-cardiac surgery.