A395 - Is vasopressor/inotrope requirement effected by ultrafiltrate volume and 24 hour fluid balance in intensive care patients undergoing acute renal replacement therapy?

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Introduction:
Patients requiring renal replacement therapy (RRT) whilst on significant doses of vasoactive medications have often been deemed unsuitable to undergo ultrafiltration (UF). However with better understanding of the pathophysiology of renal injury [1] in intensive care patients we hypothesise that vasopressor/inotrope requirement will not significantly increase with UF or with a more negative fluid balance (FB).

Methods:
Data was retrospectively collected in a general ICU/HDU of adult patients requiring acute RRT for acute kidney injury. Patients on chronic dialysis were excluded. Percentage change in vasopressor index and mean arterial pressure were combined to form the Combined Percentage Change (CPC) which we used as an index of patient stability.

Results:
38 patients were assessed undergoing a total of 206 RRT sessions. The mean age was 57 with 23 females and 15 males. Mean FB for the 24 hours from start of RRT was +651mls (range -2317 to +14850mls). Using a model to correct for significant covariates and plotting 24 hour FB against CPC we found no significant effect of FB on stability p=0.98 (Fig. 1). Mean UF volume was 880mls (range 0-3009mls). There was a non linear relationship between UF and stability with moderate volumes improving but larger volumes worsening stability (Fig. 2). This did not reach statistical significance (p=0.074) so may be due to chance but is likely due to a lack of power.

Conclusion:
Fluid balance has no effect on cardiovascular stability during RRT in our cohort but there may be a varying effect of UF depending on volume.

References:
Figure 1

Figure 2