**DOES THE FINAL INTRA AORTIC BALLOON PUMP TIP POSITION MATTER IN DEVELOPMENT OF COUNTERPULSATION RELATED COMPLICATIONS?**

ACC Moderated Poster Contributions
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**Background:** We report results of a retrospective review of IABP use in two Australasian centers and evaluate the effect of final IABP tip position on outcome.

**Methods:** Indications for counterpulsation, patient demographics, in-hospital outcomes were retrospectively collected. The chest x-ray reports provided the “final” position of the IABP tip. The position was defined as acceptable (tip was seen just below the aortic arch (aa), at T2-T5 vertebrae), malpositioned (tip>5cm below aa or at T5-T6) or severely malpositioned (tip>10cm below aa or at T7 or below). Major complication is a composite of death secondary to IABP, major limb ischemia, major IABP malfunction, balloon rupture or haemorrhage, severe renal dysfunction (rise in creatinine >200μmol/L), stroke and mesenteric ischemia.

**Results:** 645 cases were reviewed. The overall major complication rate was 26.2 and 24.3%. Severe renal impairment was the most common complication - 16.6% and second severe catheter dysfunction - 5.4%. Final IABP position was acceptable in 40%, malpositioned in 11%, severely malpositioned in 6% and unavailable for 43%. Logistic regression analysis showed IABP tip malposition (compared with satisfactory position OR=5.2 (95% CI=2.6-10.3 p<0.001); severely malpositioned OR=12.1 (95% CI=5.0-29.4, p<0.001)) was associated with major complications more than the presence of shock (OR=2.9, CI 1.8-4.9 p<0.001).

**Conclusion:** The acceptance of a less than ideal IABP tip position is highly predictive of major complications.