NEED FOR LATE REINTERVENTIONS IS STRONGLY ASSOCIATED WITH CLASS-3 TECHNICAL PERFORMANCE SCORES (MAJOR RESIDUAL DEFECTS) IN MID AND HIGH COMPLEXITY PROCEDURES

Background: Previous work at our institution has shown that major residual defects-Class-3 Technical Performance Score (TPS) was associated with more late re-interventions across a range of disease complexity. We hypothesized that this would hold true for specific procedural groups.

Methods: Patients undergoing pulmonary valve replacement (PVR) [low complexity], Fontan [mid complexity], Arterial switch operation (ASO), Aortic valve repair (AVR), complete atrioventricular canal (CAVC) repair [high complexity], from 01/01/2007 to 09/30/2011 were retrospectively followed. TPS was assigned based on previous methodology as Class-1 (optimal), Class-2 (Minor residual defects), Class-3 (Major residual defects). Length of stay and late (post discharge) re-interventions in anatomic area of repair were analyzed using non parametric methods.

Results: Of 553 patients, 512 had follow-up data. Postoperative median hospital length of stay was significantly higher for class-3 compared to class-1 TPS group in non-neonatal mid/high complexity procedures: AVR (p=0.007), CAVC repair (p>0.001), Fontan (p>0.001). Late reinterventions (Figure 1) was significantly higher for class-3 compared to class-1 TPS group in high complexity procedures such as ASO, CAVC repair and Fontan. Aortic valve repairs had higher rates of re-interventions for both class 2 and 3 TPS.

Conclusions: Inadequate TPS is strongly associated with early and late outcomes in mid and high complexity procedures, warranting closer follow-up.