

Technical Performance Score in a single center in Argentina

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Objectives: Technical Performance Score (TPS) was developed as a tool to evaluate surgical repair in certain procedures, and proved to be useful in predicting early outcomes. The objective is to describe our surgical performance and results according this score.

Methods: consecutive patients with VSD, CAVC, TOF repair and ASO procedures from January 2016 to March 2018 were included. Demographic, surgical data, postoperative course and discharge were retrospectively reviewed. Surgical repair was considered: optimal, adequate or inadequate according echocardiographic criteria. Outcomes evaluated were early mortality, adverse events and postoperative length of stay. Adverse events recorded: extracorporeal membrane oxygenator support; re-exploration for bleeding, diaphragm plication or infection; cardiac arrest requiring resuscitation; stroke; and renal failure requiring dialysis. Unplanned reinterventions in the treated anatomic area and placement of permanent pacemakers were not included, because they are components of the TPS. Statistical analysis: categorical variables are summarized as numbers and percentages and continuous variables as medians and ranges. Chi square or Wilcoxon Rank Sum Test were used for differences in outcomes according TPS score.

Results: 258 patients were included, median age 141 days (1-5342) and weight 7 kg (3-53), and genetic syndrome association in 33%. Procedures distribution were 45% VSD closure, 20% TOF repair, 18% ASO, 16% CAVC repair. Average bypass was 102 min \pm 40 and ACC 76 min \pm 32. Assigned TPS was optimal in 38.7%, adequate in 54.2% and inadequate in 6.9% cases. Postoperative median length of stay(PLOS) was 6 days (1-160); 3.4% required renal replacement, 1.9% ECMO and 5.4 % unplanned reoperation. Postoperative early mortality was 4.8%. Results grouped by TPS are describe in the table.

	TPS1	TPS 2	TPS 3
PLOS days	6 (1-85)	6 (1-106)	12.5 (0-54)
Mechanical ventilation days	1 (1-29)	2 (1-90)	5 (1-23)
Mortality (%)	1	4.3	26.3
Adverse events (%)	5	6.4	26

Conclusions: TPS was optimal or adequate in 93.1% surgical repairs. TPS class 3 was associated with higher percentage of adverse events and early mortality in our population.