

Impact of the Intensivist-led Team on Postoperative Outcomes in a Specialized Cardiac Surgical Intensive Care Unit

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INTRODUCTION: It is apparent that the increasing complexity of cardiac surgical cases requires a new level of critical care performance. The aim of the study was evaluation of the impact of a newly appointed intensivist on cardiac surgical intensive care unit patient outcomes and quality of care variables.

MATERIALS AND METHODS We performed observational cohort study with historical controls in eight-bed cardiac surgical intensive care unit (CSICU) in tertiary university hospital. Mortality, ventilation time, length of stay in the CSICU and hospital (LOS) were compared between two 1-year periods, before and after the appointment of intensivist. Data regarding these patients were collected using the department database.

MEASUREMENTS AND MAIN RESULTS: We analyzed 864 patients before (first period) and 808 patients after (second period) the intensivist appointment. The unadjusted in-hospital mortality decreased from 6.48 % (56 patients) in the first period to 4.08 % (33 patients) in the second period ($p < 0.01$). The mortality predicted according to EuroSCORE was $8.76 \pm 11.3\%$ in the first period and $8.9 \pm 12.5\%$ in the second (NS). Mean ventilation time was unchanged - 37 ± 119.2 hours vs. 37.7 ± 108.2 hours (NS). Mean ICU LOS and mean hospital stay were unchanged - 2.8 ± 6 vs. 3.1 ± 6.7 days (NS) and 8.8 ± 11.3 vs. 8.9 ± 12.5 days (NS). ICU readmission rate decrease from 4.8% to 3.1%.

CONCLUSIONS: The appointment of intensivist-led team model was associated with a positive impact on patient outcomes, and lowering postoperative mortality, especially in high-risk patients

Tab

	2006	2007	
Standard EuroSCORE	0-3		
No of patients	288	277	P=0.31
Mortality (%)	0.35% (1/288)	0.36% (1/277)	P=0.87
Standard EuroSCORE	4-6		
No of patients	269	262	P=0.46
Mortality (%)	1.12% (3/269)	1.52% (3/262)	P=0.23
Standard EuroSCORE	7-10		
No of patients	226	201	P=0.41
Mortality (%)	7.52% (17/226)	7.96% (16/201)	P=0.87
Standard EuroSCORE	>10		
No of patients	81	68	P=0.5
Mortality (%)	43.2% (35/81)	17.6% (12/68)	P>0.001