Markers of the early extubation after paediatric cardiac surgery

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Abstract

Introduction: Despite recent advances in anesthesia, cardiopulmonary bypass and surgical techniques, children undergoing congenital heart surgery require postoperative mechanical ventilation. Early extubation was defined as ventilation shorter than 12 hours.

Aim: To identify markers associated with successful early extubation after pediatric cardiac surgery.

Methods: Retrospective-prospective clinical study was performed in Paediatric Clinic and Heart Center Clinical Centre Univerity of Sarajevo from 01.01.2006 to 01.01.2011. Study included 100 children up to 5 years of age with congenital heart disease, left–right shunt and opstructive congenital heart disease. Patients were devided into two groups: I Group-54 patients extubated within 12 hours after surgery and Group II- 46 patients extubated more than 12 hours after surgery.

Results: The most frequently encountered preopeartive variables were age with odds ratio 4% 95% CI(1-7%), Down's syndrome 8.5 95% CI (1.6-43.15), failure to thrive 4.3 95% CI(1-18). Statisticly significant postoperative data included lung disease (reactive airways, pneumonia, atelectasis, pneumothorax) and with odds ratio 35.1 95% CI (4-286) and blood transfusion with odds ratio 4.6 95% CI(2-12). Proven markers were, age with cut of 21.5 months (sensitivity 74% and specificity 70%) and extracorporeal circulation (ECC) with cut of 45.5 minutes (sensitivity 71% and specificity 65%).

Conclusion: Younger age and prolonged time ECC are markers associated with prolonged mechanical ventilatio

Biography

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