Impact of age on early post-operative outcome in infants after primary repair of tetralogy of Fallot with a trans-annular patch: Single center experience

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Objectives: The aim of this study is to analyze the impact of age on early postoperative outcome assessed by Intensive Care Unit-stay (ICU) and (TOI).

Methods: From 2002 to 2013, in total 69 patients (median age 4.5 months, median weight 5.9kg with diagnosis of TOF were undergone the complete procedure with a trans-annular patch on our center. Tetralogy of Fallot (TOF) was defined as simple anomaly or as complex anomaly. 11 (16%) patients have had previous palliation. Multivariate analysis was used for physiological outcome of time mechanically ventilation hours, the length of stay at ICU and death in 30 days postoperatively. We examined the patients by age into three groups (age: 0-3 months, 4-6 months, 6 months and older) and compared ICU-stay and time of intubation with ventilation support.

Results: Patients at the age of 0-3 months had a significantly (p< 0.05) longer ICU-stay (median 9.1d, range 0 - 68.9d) and time of intubation with ventilator support period patients at the age of 3-6 months; median TOI 2.0d and 6 months and older median ICU 3.0d; median TOI 1.0d. In the group 6 months and older was a mortality at first 30 days postoperatively of 4% (n=1) compared to 0.0% in the other two groups. One patient in the group 3 died because of middle cerebral artery infarction. In the first 30 days after surgery one cardiac redo was necessary in the group 3. In all three groups were no sign of significant pulmonary valve insufficiency or stenosis in echocardiographic controls. All three groups showed good left and right ventricular functions on 30 days postoperatively.

Conclusion: The older the patients the shorter intubated time and ICU stay following cardiac surgery. In the younger group, longer ICU-stay was found to be associated with a longer postoperative ventilator support period.

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