Thrombocytopenia in Patients with Tetralogy of Fallot, A Condition Requiring Immediate Attention

Abstrak:

Background: In Indonesia, most of the patients (95%) with Tetralogy of Fallot (TF) are still faced to disadvantageous situation, since it remains difficult for them to obtain immediate surgical corrective procedure. Delayed surgical procedure for these patients may often lead to the occurrence of fatal complications, i.e., hemostatic function disorder and cerebrovascular accident accompanied with thrombocytopenia. Objective: to prove the influence of arterial oxygen saturation on the development of thrombocytopenia and to disclose correlation between arterial oxygen saturation and cut-off point and thrombocytopenia in TF patients. Methods: This was a case control study undertaken by involving 94 patients with Tetralogy of Fallot. Patients without thrombocytopenia were assigned as control group, while those with thrombocytopenia belonged to case group. Thrombocytopenia was determined as having 33,000 - 135,000 cells/mm3 cell dynamic. Arterial oxygen saturation was below 90% in room temperature, as measured by pulse oximetri. Multiple logistic regression analysis, Kappa association analysis, and McNemar test were employed in this study. Results: From 47 patients studied, significant difference was found between age and thrombocytopenic development. Average age of thrombocytopenic group was 58.81 months, and non-thrombocytopenic group was 36.19 months. Oxygen saturation of <60% was found significantly influencing the development of thrombocytopenia. Cut-off point of arterial oxygen saturation was 57% (Kappa 9.09505 and p < 0.05). Conclusions: (1) arterial oxygen saturation influences thrombocytopenic development; (2) a negative correlation of 0.2093 exists between arterial oxygen saturation and thrombocytopenic development; (3) cut-off point of arterial oxygen saturation is 57% with sensitivity and specificity of respectively 100% and 93.6%.

Keyword:

Tetralogy of Fallot, thrombocytopenia

Daftar Pustaka: