

PROGNOSTIC FACTORS FOR COMPLICATIONS OF DIPHTHERIA CHILDREN IN DR SOETOMO GENERAL HOSPITAL

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Background: Diphtheria is an infectious disease which can cause fatal complications if not recognized early and treated properly. Early diagnosis and timely intervention would result in reduced incidence and spreading of infection, as well as a decrease in morbidity and mortality. This study aimed to investigate prognostic factors that could be used to predict complications of diphtheria.

Methods: This was a case-control study of diphtheria patients admitted from January 2015 to April 2017 at Dr. Soetomo Hospital. Data was collected from medical records. Extracted data was pooled for analysis using Chi-square and Fisher's exact test, with $P < 0.05$.

Results: There were 102 patients in this study, 65 males and 37 females. The overall complications were upper respiratory tract obstruction (4.9%), upper respiratory tract obstruction and myocarditis (2%), myocarditis (2%). Age ($P=0.086$), doses of diphtheria antitoxin ($P=0.142$), anemia status ($P=0.666$), increased C-reactive protein level ($P=0.764$), positive microbiology culture ($P=0.636$) and thrombocytopenia ($P=0.065$) were similar between groups. Gender ($P=0.047$), nutritional status ($P=0.021$), diphtheria vaccine history ($P=0.005$), interval from onset of illness to diphtheria antitoxin ($P=0.008$) and extent of pseudomembrane ($P < 0.01$) was significantly different between groups.

Conclusion: Diphtheria infection in female, nutritional disorder, incomplete vaccine history, prolonged interval from onset of illness to diphtheria antitoxin and extent of pseudomembrane had worse prognosis and were more prone to develop complications.

Keywords: *diphtheria in children; prognostic factors; complication.*