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A retrospective study of acute pertussis in Hasan Sadikin Hospital–Indonesia

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ABSTRACT

Objective: To describe the representation of pertussis diagnosis in children. **Methods:** A retrospective observational study was performed on pediatric pertussis and pertussis–like syndrome registry for children <14 years of age documented from October 2008 to December 2014 in Hasan Sadikin Hospital, Indonesia. Demographic data, signs and symptoms at presentation, case definition (probable, confirmed), possible pertussis contact, pertussis vaccination status, results of *Bordetella pertussis* (*B. pertussis*) culture, complications, and outcome were recorded. **Results:** Sixty–one probable and two confirmed pertussis were documented. Male and female ratio was 1:1, mostly presented with shortness of breath, 24 (38%) subjects had posttussive vomiting, 10 (16%) had whooping–cough. Ten patients (16%) were reported to have adult possible pertussis contact. Only 2 infants had previous pertussis vaccination. All subjects presented in the second week of illness were all diagnosed as bronchopneumonia but two. The mean age was 6 months, ranging from 0–50 months. One subject required mechanical ventilation. *B. pertussis* culture was performed only in 35 (56%) subjects but positive only in two. There were no fatal cases, 55 (87%) including the subject who need mechanical ventilation had good outcome. **Conclusions:** Mostly patients were admitted on paroxysmal phase when no more active *B. pertussis* could be found from nasopharyngeal secret. A rigorous history taking particularly excessive cough, posttussive vomiting, and pertussis vaccination status need to be taken into account.

1. Introduction

Pertussis is a severe disease in children and remains as one of the 10 infant death causes worldwide. Reports show occurrence of about 10 million infected cases with almost 400 000 pertussis–related deaths annually[1]. Whooping cough usually manifests in wide spectrum of signs from

asymptomatic presentation to a mild coughing illness in adolescents and adults who have partial immunity due to past vaccination or a full spectrum of symptoms in unimmunized patients. Physicians' awareness and curiosity is needed to diagnose probable pertussis. In fact, confirmed pertussis need adequate laboratory culture examination. However, negative tests cannot be accepted as a definitive result to exclude pertussis. Therefore, it is necessary to apply improved laboratory diagnosis tests[2,3].

Diagnosis of pertussis is often delayed in children, especially adolescent due to the lack of classic symptoms (e.g. whooping cough doesn't always present) and low

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