

INTISARI

Latar belakang: Sindrom Down (DS) merupakan penyakit genetik yang disebabkan oleh kelainan jumlah pada kromosom 21. Insidensi anak DS di Indonesia diperkirakan lahir 300.000 anak DS per tahunnya. Pada anak DS disertai pneumonia, risiko kematian akan meningkat. Kejadian anak DS dengan pneumonia yang meninggal mencapai 55%.

Tujuan: Penelitian ini bertujuan untuk mengetahui risiko pneumonia sebagai faktor risiko kematian anak DS yang dirawat inap di RSUP Dr. Sardjito Yogyakarta 1 Januari 2012 sampai 31 Desember 2017.

Metode penelitian: Penelitian analitik dengan menggunakan desain *case control* berdasarkan data rekam medis pasien. Subyek penelitian terdiri dari dua kelompok yaitu anak DS rawat inap di RSUP dr. Sardjito Yogyakarta yang meninggal (kasus) dan yang hidup (kontrol). Dilakukan *matched* waktu keluar rumah sakit, dan usia antara kasus dan kontrol. Didapatkan 120 kelompok kasus dan 120 kelompok kontrol. Dilakukan analisis bivariat, multivariat, dan stratifikasi menggunakan Mantel-Haenzel.

Hasil: Usia kasus saat keluar rumah sakit ≤ 24 bulan sebesar 85,8% dan kelompok kontrol 70,8%. Didapatkan gizi buruk pada kelompok kasus 49,1 % dan kontrol 50,9%. Anak dengan penyakit jantung bawaan kelompok kasus 55,0 % dan kontrol 49,2 %. Proporsi anak dengan pneumonia pada kelompok kasus 65,8 % dan kontrol 30 %. Gizi buruk dan penyakit jantung bawaan tidak berpengaruh secara bermakna terhadap kematian $p > 0,05$ (gizi buruk $p = 0,795$; penyakit jantung bawaan $p = 0,366$). Penyakit jantung bawaan dan gizi buruk bukan merupakan faktor perancu. Pneumonia mempengaruhi kejadian kematian secara signifikan pada anak DS ($p < 0,001$; OR 4,525; CI 95% 2,61-7,86).

Simpulan: Pneumonia meningkatkan risiko kematian 4,5 kali pada anak DS.

Kata kunci: *Down Syndrome*, Trisomi 21, Pneumonia, Kematian, Faktor Risiko

ABSTRACT

Background: Down syndrome (DS) is a genetic disease caused by abnormalities on the number of chromosome 21. The incidence of DS in Indonesia is estimated to be 300.000 cases per year. Down syndrome suffering with pneumonia will increase the mortality risk. The mortality incidence of DS suffering with pneumonia has reached 55%.

Objectives: This study aimed to determine the risk of pneumonia as a risk factor for DS mortality that hospitalized in Dr. Sardjito General Public Hospital, Yogyakarta from January 1, 2012 until December 31, 2017.

Methods: We used analytical approach by using *case control* design based on patient medical record data. The subjects of the study classified into two groups: DS inpatients in Dr. Sardjito General Public Hospital, Yogyakarta who died (case) and still lived (control). We conducted *subject matching* of case and control group when patients discharged from hospital and recorded the age at that time. There were 120 case groups and 120 control groups. We conducted bivariate, multivariate, and stratified analysis using Mantel-Haenszel.

Results: The case and control group with age less than 24 months when discharged from hospital was 85.8% and 70.8%, with malnutrition was 49.1% and 50.9%, congenital heart disease was 55.0% and 49.2%, respectively. The proportion of children with pneumonia in the case group was 65.8% and control group was 30%. We found that malnutrition and congenital heart disease was not significantly associated with mortality incidence with $p > 0.05$ (malnutrition $p = 0.795$, congenital heart disease $p = 0.366$). However, congenital heart disease and malnutrition were not confounding factors. Whereas, pneumonia was significantly associated with the mortality incidence in DS children ($p < 0.001$, OR 4.525, 95% CI 2.61-7.86).

Conclusions: Pneumonia increases the mortality risk by 4.5 times in DS children.

Keyword: *Down Syndrome, Trisomy 21, Pneumonia, Mortality, Risk Factor.*