INTISARI

Latar belakang: Demam neutropenia (DN) merupakan kondisi kegawatdaruratan dalam bidang onkologi yang membutuhkan penanganan segera dan cepat. *International Pediatric Fever and Neutropenia Guideline Panel* telah melakukan validasi skema stratifikasi *Swiss Pediatric Oncology Group* (SPOG) 2003 FN yang dipublikasikan pada 2010 walaupun belum dipakai secara luas. Tujuan penelitian ini adalah untuk mengevaluasi peran peningkatan *procalcitonin* sebagai prediktor komplikasi medis serius pada DN keganasan anak di RSUP dr. Sardjito.

Metode: Penelitian observasional dilakukan dengan subjek seluruh pasien DN keganasan anak di RSUP Dr. Sardjito Yogyakarta yang dilakukan pemeriksaan PCT. Data dianalisis untuk mengetahui kekuatan hubungan antara PCT dan komplikasi medis dalam rasio prevalensi (PR). Komplikasi medis serius yang dinilai adalah pasien dirawat di ruang intensif, atau komplikasi yang mengancam jiwa dengan keterlibatan sistem saraf pusat, atau pasien meninggal.

Hasil: Pada penelitian ini, didapatkan 64 subjek DN keganasan anak yang memenuhi kriteria inklusi dan eksklusi. Sebanyak 15 subjek mengalami komplikasi medis serius dan 49 subjek tanpa komplikasi medis serius. Proporsi jumlah subjek dengan komplikasi medis serius mengalami peningkatan signifikan sebanding dengan kenaikan kadar PCT dengan p=0,028. Rasio prevalensi (RP) dihitung dengan menggunakan ≤0,45 ng/mL sebagai referensi. Kadar PCT >11,48 ng/mL meningkatkan risiko komplikasi medis serius 15 kali lebih tinggi secara signifikan dibandingkan pasien dengan PCT ≤0,45 ng/mL (p=0,018).

Simpulan: *Procalcitonin* berperan dalam memprediksi kejadian komplikasi medis serius pada demam netropenia keganasan anak. Proporsi jumlah subjek dengan komplikasi medis serius mengalami peningkatan signifikan sebanding dengan kenaikan kadar PCT.

Kata kunci: *procalcitonin*, demam netropenia, keganasan anak, stratifikasi risiko, komplikasi medis serius

ABSTRACT

Background: Febrile neutropenia (FN) is an oncology emergency condition that requires immediate and rapid treatment. The International Pediatric Fever and Neutropenia Guidelines Panel has validated the risk stratification score that was published in 2010, Swiss Oncology Group (SPOG) 2003 FN even though it has not been widely used. The purpose of this study was to evaluate the role of increased levels of PCT as a predictor of serious medical complications FN paediatrics patients with malignancy at Dr. Sardjito General Hospital Yogyakarta.
Method: An observational study was conducted. The subjects were FN paediatrics patients with malignancy at Dr. Sardjito General Hospital Yogyakarta that were carried out PCT examination. The prevalence ratio (PR) was calculated to know the correlation between PCT and serous medical complications. The medical complications were included death, or complication requiring intensive care unit treatment, or potentially life-threatening complication.
Results: In this study, there were 64 subjects of FN paediatrics with malignancy who met the inclusion and exclusion criteria, consisted of 15 subjects with serious medical complications and 49 subjects without serious medical complications. The proportion of subjects with serious medical complications was increase significantly along with the increase of PCT levels ($p = 0.028$). In this study, the prevalence ratio (PR) was calculated using ≤0.45 ng/mL as a reference. The level of PCT > 11.48 ng/mL had 15 times higher significantly risk compared to PCT ≤0.45 ng/mL ($p = 0.0018$).
Conclusion: Procalcitonin can predict serious medical complications in FN paediatrics patients with malignancy. The proportion of subjects with serious medical complications increase significantly along with the increase of PCT levels.

Keywords: procalcitonin, febrile netropenia, paediatric with malignancy, risk stratification, serious medical complications