Kadar Immature Platelet Fraction pada Pasien Anak dengan Immune Thrombocytopenia dan Leukemia = Immature Platelet Fraction among Pediatric Immune Thrombocytopenia and Leukemia Patients

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Abstrak

Latar belakang: Immune thrombocytopenia (ITP) didiagnosis dengan mengekslusi penyebab lain trombositopenia. Mekanisme trombositopenia terjadi melalui 2 mekanisme, yaitu destruksi trombosit seperti pada pasien ITP dan penurunan produksi trombosit pada pasien leukemia. Aspirasi sumsum tulang merupakan metode yang dapat membedakan mekanisme trombositopenia yang terjadi, tetapi karena invasif tidak rutin dilakukan untuk diagnosis. Seiring dengan perkembangan zaman, dapat dilakukan pemeriksaan trombosit muda dengan teknik flouresensi untuk menilai kadar immature platelet fraction (IPF). Penelitian ini dilakukan untuk membandingkan kadar IPF pada pasien ITP dibandingkan dengan leukemia.
Metode: Studi potong-lintang kadar IPF pasien anak dengan ITP dan leukemia, yang dilaksanakan dari 2017-2020 di RSUPN Cipto Mangunkusumo, Jakarta. Sampel penelitian adalah pasien anak umur kurang dari 18 tahun, yang menderita ITP dan leukemia, yang belum mendapatkan kemoterapi ataupun imunosupresan. Data penelitian diambil dari rekam medis atau pemeriksaan darah rutin.
Hasil: Dari 42 pasien, didapatkan 21 pasien ITP dan 21 pasien leukemia. Terdapat perbedaan bermakna (16,6 poin) dari rerata kadar IPF pasien ITP dibandingkan pasien leukemia (P<0,001). Pasien ITP memiliki kadar rerata IPF sebesar 18,6%(SB 12,1%). Pasien leukemia memiliki kadar IPF 2%(SB 1,31%).
Kesimpulan: Terdapat perbedaan bermakna kadar IPF pada pasien ITP dibandingkan pasien leukemia akut.
.....Background and aim: Immune thrombocytopenia (ITP) is diagnosed by excluding other causes of thrombocytopenia. The thrombocytopenia itself could occur through 2 mechanisms, which were platelet destruction as in ITP, and decrease platelet production as in leukemia. Bone marrow aspiration used to be done to distinguish the mechanism of thrombocytopenia, but it has not been routinely done due to its invasiveness. Examination of young platelets with fluorescence technique are currently done to assess the level of Immature Platelet Fraction (IPF). This study was conducted to evaluate the differences in IPF levels in ITP patients compared with leukemia patients.
Methods: A cross-sectional study was carried out on the IPF levels on patients with ITP and leukemia, from 2017-2020 at Cipto Mangunkusumo General Hospital, Jakarta. The study sample was pediatric patients, less than 18 years old, diagnosed with ITP and acute leukemia, whom had not received any chemotherapy or immunosuppressants. Research data were taken from medical records and/or routine blood tests.
Results: Total of 42 patients, 21 ITP patients and 21 leukemia patients were found. There was a significant difference (16,6 poin) in the mean of IPF levels of ITP patients compared with leukemia patients (P <0.001). ITP patients had an average IPF level of 18,6% (SB 12,1). Leukemia patients have 2% IPF levels (SB 1,31).
Conclusions: There is a subtantial different in IPF in ITP patient compared to acute leukemia patients.