Profil besi pada bayi prematur usia kronologis dua bulan = Iron profile of preterm infants at two months of chronological age

Henny Adriani Puspitasari, author

Abstrak

Latar belakang: Bayi prematur rentan kekurangan zat besi karena cadangan besi ibu rendah, kebutuhan besi untuk pertumbuhan dan pengambilan sampel laboratorium. Risiko tersebut meningkat saat bayi prematur berusia 2 bulan. Kecukupan zat besi tubuh dinilai dengan kadar feritin, besi serum (SI), saturasi transferin (Tfsat), total iron binding capacity (TIBC) dan Hb.
Tujuan: Mengetahui profil besi pada bayi prematur usia kronologis 2 bulan.
Metode: Studi potong lintang dilakukan terhadap bayi usia 2 bulan yang lahir usia gestasi (UG) 32-36 minggu saat berkunjung ke klinik tumbuh kembang. Pemeriksaan darah tepi lengkap, apusan darah tepi, SI, TIBC, Tfsat dan feritin dilakukan pada sampel darah vena. Data lain diperoleh dari wawancara dan telaah rekam medik.
Hasil : Studi diikuti oleh 83 subjek yang terdiri dari 51% lelaki dan 93% lahir dari ibu berusia >20 tahun. Berat lahir terkecil adalah 1.180 g dan terbesar adalah 2.550 g. Prevalens ADB sebesar 6% dan DB sebesar 10%. Subjek ADB memiliki kadar Hb terendah 6,8 g/dL dan feritin terendah 8,6 ng/mL. Median kadar SI adalah 48 g/dL; TIBC 329 g/dL dan Tfsat 17%. Bayi ADB sebagian besar lelaki (5/5), kenaikan BB 2x berat lahir (4/5), tidak disuplementasi besi (3/5), latar belakang pendidikan ibu rendah (3/5) dan golongan sosial-ekonomi rendah- menengah ke bawah (3/5).
Simpulan: Prevalens ADB sebesar 6% dan DB sebesar 10%. Sebagian besar subjek yang mengalami DB dan ADB memiliki kadar SI, Tfsat dan feritin rendah serta TIBC meningkat. Subjek lelaki dengan kenaikan BB 2x berat lahir, tidak disuplementasi besi, latar belakang pendidikan ibu rendah dan golongan sosial ekonomi rendah-menengah ke bawah lebih banyak yang mengalami ADB.
<hr>
Background: Preterm infants are vulnerable to iron deficiency (ID) due to lack of maternal iron stores, phlebotomy and increasing demand during growth. Risk of ID increases when hemoglobin (Hb) level started to decrease at 2 months of age. Iron body adequacy is measured by examining feritin, serum iron (SI), transferrin saturation, total iron binding capcity (TIBC) and Hb.
Objective: To describe iron profile in preterm infants at 2 months of chronological age (CA).
Methods: A cross-sectional study was conducted to 2 months old infants born at 32-36 gestational age visiting Growth and Development Clinics. Parents interview and medical record review were taken at visit. Complete blood count, blood smear, SI, TIBC, Tfsat and ferritin level were performed.
Results: Eighty three subjects were enrolled in this study. Mostly were male (51%) and born from mother >20 years old (93%). The lowest birth weight was 1,180 g and the highest was 2,550 g. Prevalence of IDA is 6% and ID is 10%. The lowest Hb level found in IDA infants was 6.8 g/dL and ferritin level was 8.6 ng/mL. Median of SI level was 48 g/dL; TIBC 329 g/dL; and Tfsat 17. Subjects with IDA were mostly men (5/5), achieved more than twice birth weight (4/5), non-iron supplemented (3/5), born from low education background mother (3/5) and has low socio-economic status (3/5).

Conclusions: Prevalence of IDA is 6% and ID is 10%. Most subjects with ID and IDA have low SI, high TIBC, low Tfsat and low ferritin level. Male subjects who weigh twice birth weight, non-iron supplemented, born form low educational background and socioeconomic status mother were mostly suffer from IDA.