Gambaran Immature Reticulocyte Fraction dan status Besi pada remaja putri setelah suplementasi Besi oral = Profile of Immature Raticulocyte Fraction and Iron status within girls post Iron supplementation per oral

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Abstrak

Defisiensi besi merupakan keadaan dimana jumlah total besi tubuh berkurang yang bila berlanjut menyebabkan anemia defisiensi besi. Saat ini tersedia parameter immature reticulocyte fraction (IRF) yang menunjukkan fraksi retikulosit muda di sirkulasi yang bermanfaat menilai aktivitas eritropoiesis. Tujuan penelitian ini untuk mengetahui korelasi IRF dengan kadar besi dan feritin serum, dan saturasi transferin, serta korelasi feritin dan hepsidin serum. Penelitian dengan desain penelitian potong lintang ini melibatkan 77 subyek remaja putri sekolah yang telah haid dan mendapat suplementasi besi oral 2 kali seminggu selama 12 minggu. Dilakukan pemeriksaan kadar hemoglobin, hitung retikulosit absolut, IRF, kadar besi, feritin, dan hepsidin serum serta saturasi transferin. Didapatkan korelasi bermakna dengan kekuatan sedang antara IRF dan kadar besi dan feritin serum, serta saturasi transferin (berturut-turut p<0,0001, r = -0,443; p = <0,0001, r = -0,439, dan p<0,0001, r = -0,423), dan antara kadar feritin dan hepsidin serum (p<0,001, r = 0,371). Dapat disimpulkan bahwa IRF memiliki hubungan bermakna dengan status besi tubuh.
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Decreased total body iron will cause iron deficiency, which could end up to iron deficiency anemia. Currently, immature reticulocyte fraction (IRF) was introduced as a parameter to show young reticulocyte fraction in the circulation, as a useful tool to evaluate erythropoiesis activity. The aim of this study was to investigate the correlation between IRF with serum iron and ferritin concentrations, and with transferin saturation, and between serum ferritin with hepcidin concentration. A cross sectional study was conducted in Pramuka island involving 77 post-menarchal adolescent school girls, who had received twice weekly iron supplementation for 12 weeks. Serum concentrations of iron, ferritin, and hepsidin, haemoglobin concentration, transferin saturation, absolute reticulocyte count, and IRF were determined. There were significance correlations between IRF with serum iron and ferritin, concentrations, and with transferin saturation (p<0.0001, r = - 0.443; p<0.0001, r = -0.439 ; and p = <0.0001, r = -0.423, respectively), and between serum hepsidin and ferritin concentrations (p<0.001, r = 0.371). It can be concluded that IRF had significant correlation with iron status.