

Status Besi pada Pasien Sindrom Nefrotik Idiopatik Aktif dan Remisi = Iron Status in Active and in Remission Idiopathic Nephrotic Syndrome

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Abstrak

Latar belakang: Sindrom nefrotik (SN) idiopatik merupakan penyakit glomerulus dengan proteinuria akibat peningkatan permeabilitas glomerulus. Transferin merupakan salah satu protein yang keluar di urin dan dapat mengganggu homeostasis besi. Keadaan ini dapat menyebabkan defisiensi besi dan anemia defisiensi besi (ADB).

Tujuan: Mengetahui perbedaan status besi, transferin urin, proporsi defisiensi besi dan ADB pada pasien SN idiopatik aktif dan remisi.

Metode: Penelitian potong lintang pada pasien SN idiopatik aktif dan remisi usia 1-18 tahun di RSCM.

Pengukuran status besi menggunakan Hb, MCV, MCH, Ret-He, SI, TIBC, ferritin, dan saturasi transferin.

Pengukuran transferin urin menggunakan metode enzyme-linked immunosorbent assay (ELISA).

Hasil: Terdapat 65 subyek, dengan 32 pasien SN idiopatik aktif dan 33 pasien remisi. Kadar SI antara kelompok aktif dan remisi adalah $60,7 \pm 33,5$ $\mu\text{g/dL}$ dan $84,6 \pm 35,3$ $\mu\text{g/dL}$ ($p < 0,05$). Kadar TIBC antara kelompok aktif dan remisi adalah $220 \pm 90,7$ $\mu\text{g/dL}$ dan $309,4 (\pm 47,7)$ $\mu\text{g/dL}$ ($p < 0,05$). Kadar transferin urin antara kelompok aktif dan remisi adalah $435,3 (7,7-478,4)$ ng/mL dan $23,4 (0-358)$ ng/mL ($p < 0,05$). Proporsi defisiensi besi dan ADB pada kelompok aktif adalah 7(21,9%) dan 5 (15,6%) subyek, sedangkan pada kelompok remisi adalah 4(12,6%) dan 1(3%) subyek. Perbedaan proporsi tersebut tidak bermakna ($p = 0,04$; RR 2,47; IK95% 0,98-6,23).

Kesimpulan: Kelompok SN idiopatik aktif memiliki nilai SI dan TIBC yang rendah serta transferin urin yang tinggi. Proporsi defisiensi besi dan ADB pada kelompok SN idiopatik aktif lebih tinggi walaupun tidak bermakna secara statistik.

.....Background: Idiopathic nephrotic syndrome (NS) is a common glomerular disease in children, which cause increased glomerular permeability resulting in proteinuria. Transferrin is one of the protein that is excreted in the urin, thus disturbing iron homeostasis and may lead to iron deficiency (ID) or iron deficiency anemia (IDA).

Objective: To know the differences in iron status, urinary transferrin, and the proportion of ID and IDA in children with active and remission idiopathic NS.

Methods: A cross-sectional design study was conducted on patients with active and remission idiopathic NS aged 1-18 years at RSCM. Measurement of iron status using Hb, MCV, MCH, Ret-He, SI, TIBC, ferritin, and transferrin saturation. Measurement of urinary transferrin using enzyme-linked immunosorbent assay (ELISA).

Result: There were 65 study subjects, with 32 patients with active idiopathic NS and 33 subjects were in remission. The SI levels between the active and remission groups were 60.7 ± 33.5 g/dL and 84.6 ± 35.3 g/dL ($p < 0.05$). The TIBC levels between the active and remission groups were 220 ± 90.7 g/dL and $309.4 (\pm 47.7)$ g/dL ($p < 0.05$). The median of urinary transferrin levels between the active and remission groups were $435.3 (7.7-478.4)$ ng/mL and $23.4 (0-358)$ ng/mL ($p < 0.05$). The proportions of ID and IDA in the active

group were 7(21.9%) and 5(15.6%) subjects, while in the remission group were 4(12.6%) and 1(3%) subjects. Nonetheless the difference were not statistically significant ($p=0.04$; RR 2.47; CI95% 0.98-6.23). Conclusion. Active idiopathic NS had significant lower values of SI and TIBC, and higher urinary transferrin levels. The proportion of ID and IDA in the active group was higher, although not significant.