

PERBEDAAN RESPON KLINIS DAN LABORATORIS PASCA PEMBERIAN HUMAN ALBUMIN PADA PENDERITA SINDROM NEFROTIK PRIMER KELAINAN MINIMAL DAN BUKAN KELAINAN MINIMAL

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Intisari

Latar belakang. Hipoalbuminemia akibat proteinuria merupakan kelainan utama pada penderita sindrom nefrotik primer. Oleh karena semua gejala klinis dan laboratoris merupakan konsekuensi dari hipoalbuminemia, maka usaha untuk mengembalikan albumin yang hilang melalui urin dengan cara pemberian Human Albumin sangat penting dalam mempertahankan dan memperbaiki keadaan penderita. Tetapi permasalahan yang timbul adalah tidak semua penderita Sindrom Nefrotik mampu mendapatkan terapi Human Albumin karena harganya mahal.

Tujuan. Penelitian ini bertujuan untuk mengetahui perbedaan respon klinis dan laboratoris pasca pemberian Human Albumin pada penderita Sindrom Nefrotik Primer Kelainan Minimal (SNPKM) dan Sindrom Nefrotik Primer Bukan Kelainan Minimal (SNPBKM).

Desain penelitian. Eksperimental Kuasi dengan model eksperimental ulang non-random.

Metode. Subyek dikelompokkan berdasarkan hasil histopatologi biopsi ginjal. Pengukuran variabel edema, berat badan, diuresis, kadar protein urin dan albumin serum dilakukan sebelum dan satu minggu setelah pemberian Human Albumin dan hasilnya kemudian dibandingkan pada kedua kelompok.

Hasil. Didapatkan 53 subyek yang memenuhi kriteria inklusi dan eksklusi, dengan 28 subyek pada kelompok SNPKM dan 25 subyek pada kelompok SNPBKM. Pada penderita SNPKM didapat perbedaan bermakna terhadap penurunan berat badan ($p < 0.001$, IK 95%; 1.60~3.61), perbaikan edema anasarka (RR 4.67, $p < 0.001$, IK 95%; 2.30~9.49), kenaikan jumlah diuresis ($p < 0.001$, IK 95%; -1.70~ -1.08), penurunan protein urin ($p < 0.001$, IK 95%; 136.04~213.95) dan kenaikan kadar albumin serum ($p < 0.001$, IK 95%; -1.17~ -0.78) pasca pemberian Human Albumin. Sementara pada penderita SNPBKM perbedaan bermakna hanya didapat pada kenaikan jumlah diuresis ($p < 0.001$, IK 95%; -0.76~ -0.34) dan kenaikan kadar albumin serum ($p < 0.001$, IK 95%; -0.69~ -0.33). Jika dibandingkan pada kedua kelompok, perbaikan klinis edema (RR 3.1, $p < 0.001$, IK 95%; 1.56~6.16), penurunan berat badan ($p = 0.008$, IK 95%; 2.49~15.66), kenaikan jumlah diuresis ($p < 0.001$, IK 95%; -1.19~ -0.49), penurunan protein urin ($p < 0.001$, IK 95%; 101.00~201.28) dan kenaikan kadar albumin serum ($p < 0.001$, IK 95%; -0.85~ -0.27) lebih baik pada kelompok SNPKM.

Kesimpulan. Perbaikan klinis edema, peningkatan kadar albumin serum dan penurunan kadar protein urin lebih baik pada penderita SNPKM dibandingkan pada penderita SNPBKM pasca pemberian Human Albumin.

Kata kunci : sindrom nefrotik primer kelainan minimal, sindrom nefrotik primer bukan kelainan minimal, Human Albumin, eksperimental kuasi.

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The Clinical and Laboratory Differences Between Minimal and Non Minimal Change Primary Nephrotic Syndrome Following Human Albumin Administration

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Abstract

Background. Hypoalbuminemia resulted from proteinuria is the main disorder in patient with primary nephrotic syndrome. Because all clinical and laboratory symptoms are consequences of hypoalbuminemia, the effort to replace the lost albumin via urine is important to maintain and improve patient condition. However, human albumin is so costly that not all patients could afford the Human Albumin treatment cost.

Objectives. This study aims to determine the differences of clinical responses (improved edema and diuresis) and laboratory responses (serum albumin and urine protein level) following Human Albumin administration between Minimal Change Primary Nephrotic Syndrome (MCPNS) and Non-Minimal Change Primary Nephrotic Syndrome (N-MCPNS).

Study design. Quasi experimental trial with non randomized experimental model.

Methods. Patients were grouped based on histopathologic result of renal biopsy. The measurement of variables, i.e edema, body weight, diuresis, urine protein level and serum albumin level were conducted before and one week after Human Albumin administration, and the results were compared between the two groups.

Results. There were 53 patients who met the inclusion and exclusion criteria, 28 patients were in MCPNS group and 25 patients were in N-MCPNS group. In MCPNS, it is obtained significant differences toward decrease of body weight ($p < 0.001$, CI 95%; 1.60 ~ 3.61), improved of edema (RR 4.67, $p < 0.001$, CI 95%; 2.30 ~ 9.49), increase of diuresis ($p < 0.001$, CI 95%; -1.70 ~ -1.08), decrease of urine protein ($p < 0.001$, CI 95%; 136.04 ~ 213.95) and increase of serum albumin ($p < 0.001$, CI 95%; -1.17 ~ -0.78) following Human Albumin administration. Meanwhile in N-MCPNS, it is obtained only in increase of diuresis ($p < 0.001$, CI 95%; -0.76 ~ -0.34) and increase of serum albumin ($p < 0.001$, CI 95%; -0.69 ~ -0.33). When the two group are compared, improved of edema (RR 3.1, $p < 0.001$, CI 95%; 1.56 ~ 6.16), decrease of body weight ($p = 0.008$, CI 95%; 2.49 ~ 15.66), increase of diuresis ($p < 0.001$, CI 95%; -1.19 ~ -0.49), decrease of urine protein ($p < 0.001$, CI 95%; 101.00 ~ 201.28) and increase of serum albumin ($p < 0.001$, CI 95%; -0.85 ~ -0.27) are better in MCPNS group.

Conclusion. After Human Albumin administration, the increased serum albumin level and decreased urine protein level in patients with Minimal Change Primary Nephrotic Syndrome were better than those with Non Minimal Change Primary Nephrotic Syndrome.

Keywords: minimal change primary nephrotic syndrome, non-minimal change primary nephrotic syndrome, Human Albumin, quasi experimental

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