

Perbandingan efektivitas hemodialisis dengan atau tanpa suplementasi natrium bikarbonat oral dalam mempertahankan kadar normal bikarbonat darah = Comparison of the effectiveness of hemodialysis with or without oral sodium bicarbonate supplementation in maintaining normal blood bicarbonate levels

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Abstrak

Latar Belakang dan tujuan: penyakit ginjal stadium akhir (End Stage Renal Disease/ESRD) prevalensinya meningkat secara signifikan di seluruh dunia, termasuk di Indonesia. Pada penyakit ginjal kronik dan ESRD mudah sekali terjadi asidosis metabolik, guna mencegahnya diberikan suplemen NaHCO_3 oral atau hemodialisis. Sebagian klinisi tetap memberikan suplementasi NaHCO_3 oral pada pasien ESRD yang sudah menjalani hemodialisis rutin, namun sebagian lagi tidak. Penelitian ini bertujuan mengevaluasi apakah masih diperlukan suplementasi NaHCO_3 oral pada pasien yang sudah menjalani hemodialisis rutin dua kali seminggu.

Metode: Penelitian observasional analitik dengan desain potong lintang dilakukan di Unit Hemodialisis Rumah Sakit Pusat Pertamina Jakarta pada Desember 2019 hingga Februari 2020. Sampel secara konsekutif dipilih dari pasien dengan hemodialisis rutin 2 kali per minggu minimal 3 bulan dan tidak dalam kondisi hemodinamik yang tidak stabil; 30 orang yang mendapat suplementasi NaHCO_3 oral dan 30 orang yang tidak. Sampel darah vena pre dialisis diambil untuk pemeriksaan analisis gas darah guna mengukur kadar HCO_3 .

Hasil: Rerata lama HD per kali tindakan pada kelompok tanpa suplementasi (4 jam 14 menit), dan kelompok dengan suplementasi NaHCO_3 (4 jam 26 menit) tidak berbeda signifikan ($p = 0.051$, $\text{CI} = -0,4006 - 0,0006$). Proporsi pasien ESRD dengan hemodialisis rutin tanpa suplementasi NaHCO_3 oral yang mencapai kadar HCO_3 pre dialisis dalam rentang normal adalah 26,7%, sedangkan yang mendapat suplementasi NaHCO_3 Total proporsinya secara signifikan lebih tinggi yaitu 53,3% ($p = 0,035$, $\text{PR} = 1,57$; $\text{IK} = 1,013 - 2,438$).

..... Background and aim: the prevalence of end-stage renal disease (ESRD) has increased significantly worldwide, including in Indonesia. In chronic kidney disease and ESRD metabolic acidosis is very easy to occur, to prevent it given oral NaHCO_3 supplements or hemodialysis. Some clinicians continue to provide oral NaHCO_3 supplementation to ESRD patients who are already undergoing routine hemodialysis, but some do not. This study aims to evaluate whether oral NaHCO_3 supplementation is still necessary in patients who have undergone routine hemodialysis twice a week.

Methods: An analytic observational study with cross-sectional design was carried out in the Hemodialysis Unit of Pertamina Central Hospital Jakarta from December 2019 to February 2020. Samples were consecutively selected from patients with routine hemodialysis twice per week for at least 3 months and were not in a hemodynamically unstable condition; 30 people who received oral NaHCO_3 supplementation and 30 people who did not. Pre-dialysis venous blood samples were taken for blood gas analysis to measure HCO_3 levels.

Results: The mean length of HD per action in the group without supplementation (4 hours 14 minutes), and

the group with NaHCO₃ supplementation (4 hours 26 minutes) was not significantly different ($p = 0.051$, CI = -0.4006 - 0.0006). The proportion of ESRD patients with routine hemodialysis without oral NaHCO₃ supplementation who achieved pre-dialysis HCO₃ levels in the normal range was 26.7%, while those who received oral NaHCO₃ supplementation were significantly higher at 53.3% ($p = 0.035$, PR = 1, 57; IK = 1,013-2,438).

Conclusion: In ESRD patients with routine HD 2 times per week (8 hours / week, HCO₃ supplementation is still needed to maintain predialysis HCO₃ levels within the normal range.