

ABSTRACT

The Effect of High-Protein Snack Consumption on Nutrition Intake, Nutritional Status, and Hand Grip Strength in Patients with Stage V Chronic Kidney Disease Undergoing Hemodialysis in Hospital Study on Hemodialysis Patients in RSUD Alimuddin Umar Lampung Barat

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Background: Protein-energy wasting (PEW) and malnutrition are prevalent among hemodialysis patients, leading to reduced muscle mass, hand grip strength, and adverse clinical outcomes. Adequate protein intake during hemodialysis is crucial to counteract catabolic effects and improve nutritional status

Objective: This study aimed to analyze the effects of high-protein snack consumption on nutrient intake, nutritional status, and hand-grip strength with stage V chronic kidney disease (CKD) patients undergoing hemodialysis at RSUD Alimuddin Umar Lampung Barat.

Methods: A quasi-experimental design was employed with two groups: the intervention group received high-protein snacks (18 g/session), while the control group received low-protein snacks (<12 g/session). Nutrient intake was assessed using 24-hour recall, handgrip strength was measured with a Camry dynamometer, and clinical outcomes were evaluated through anthropometric and biochemical parameters.

Results: The findings demonstrated substantial elevations in nutritional consumption, hemoglobin levels, and urea ($p < 0.05$). Significant improvements were observed in energy ($p = 0.036$), protein ($p = 0.000$), fat ($p = 0.000$), carbs ($p = 0.040$), sodium ($p = 0.010$), potassium ($p = 0.043$), phosphorus ($p = 0.001$), hemoglobin ($p = 0.001$), and urea ($p = 0.015$). No substantial alterations were observed in BMI ($p = 0.836$), muscle mass ($p = 0.575$), creatinine levels ($p = 0.183$), and hand-grip strength ($p = 0.899$).

Conclusion: Giving high-protein snacks twice a week for six weeks can increase nutrient intake and Hb and reduce urea levels.

Keywords: hemodialysis, high protein snack, protein-energy wasting, nutrient intake, biochemical parameters.

ABSTRAK

Pengaruh Pemberian *Snack* Tinggi Protein selama Hemodialisis terhadap Asupan Zat Gizi, Status Gizi dan Kekuatan Genggam Tangan pada Pasien Gagal Ginjal Kronis (GGK) Tahap V di Rumah Sakit

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Latar Belakang : *Protein-energy wasting* (PEW) dan malnutrisi merupakan masalah utama pada pasien hemodialisis, yang menyebabkan penurunan massa otot, kekuatan fisik, serta hasil klinis yang tidak optimal. Asupan protein yang cukup selama hemodialisis sangat penting untuk mengurangi efek katabolik dan meningkatkan status gizi.

Tujuan : Penelitian ini bertujuan untuk menganalisis pengaruh konsumsi *snack* tinggi protein selama hemodialisis terhadap asupan zat gizi, status gizi, kekuatan genggam tangan pada pasien penyakit ginjal kronis (GGK) stadium V di RSUD Alimuddin Umar Lampung Barat.

Metode : Penelitian menggunakan desain kuasi-eksperimen dengan dua kelompok, kelompok intervensi yang menerima *snack* tinggi protein (18 g/sesi) dan kelompok kontrol yang menerima *snack* rendah protein (<12 g/sesi). Asupan zat gizi dinilai menggunakan *recall* 24 jam, kekuatan genggam tangan diukur dengan *dinamometer Camry*, dan hasil klinis dievaluasi melalui parameter antropometri dan biokimia.

Hasil : Hasil penelitian menunjukkan peningkatan signifikan pada asupan zat gizi, Hb dan ureum. ($p < 0,05$). Energi ($p = 0,036$), Protein ($p = 0,000$), Lemak ($p = 0,000$), KH ($p = 0,040$), Natrium ($p = 0,010$), Kalium ($p = 0,043$) Fosfor ($p = 0,001$) hemoglobin ($p = 0,001$), ureum ($p = 0,015$) tidak terdapat perubahan signifikan pada IMT ($p = 0,836$), massa otot ($p = 0,575$), kreatinin ($p = 0,183$) dan kekuatan genggam tangan ($p = 0,899$)

Kesimpulan : Pemberian *snack* tinggi protein, 2x/minggu selama 6 minggu dapat meningkatkan asupan zat gizi, Hb dan menurunkan kadar ureum.

Kata Kunci: hemodialisis, *snack* tinggi protein, pemborosan energi protein, asupan zat gizi, parameter biokimia.