

ABSTRAK

Hubungan antara Asupan Energi, Protein, dan Vitamin D dengan Kejadian Sarkopenia pada Pasien Hemodialisis

Natalia Hariyanti

Latar Belakang: Sarkopenia adalah sindrom yang ditandai dengan massa otot rendah disertai dengan penurunan kekuatan otot rangka dan atau penurunan kinerja fisik biasanya terjadi pada pasien Penyakit Ginjal Tahap Akhir (PGTA) yang menjalani dialisis. Proses dialisis berkaitan dengan asupan makanan karena dapat menyebabkan penyusutan otot melalui perubahan keseimbangan protein tubuh. Kekurangan energi, protein dan vitamin D berkontribusi pada hilangnya massa dan fungsi otot.

Tujuan: Mengetahui hubungan antara asupan energi, protein dan vitamin D dengan kejadian sarkopenia pada pasien PGTA yang menjalani hemodialisis.

Metode: Sebuah studi *cross sectional* dilakukan di Rumah Sakit Setjonegoro Wonosobo pada bulan Desember 2023. Sebanyak 86 subjek dipilih dengan menggunakan teknik *consecutive sampling*. Parameter sarkopenia diukur dengan menggunakan BIA, *handgrip strength dynamometer*, dan *stopwatch*, serta diklasifikasikan berdasarkan kriteria *Asian Working Group for Sarcopenia (AWGS) 2019*. Asupan energi, protein, dan vitamin D diukur dengan menggunakan kuesioner *Semi-Quantitative Food Frequency Questionnaire (SQ-FFQ)*. Data dianalisis menggunakan uji *Mann-Whitney* dan Uji Regresi Linier.

Hasil: Terdapat 23,3% subjek yang mengalami sarkopenia. Terdapat hubungan yang bermakna antara asupan energi dengan sarkopenia (0,000), asupan protein dengan sarkopenia (0,000), dan asupan vitamin D dengan sarkopenia (0,002). Terdapat hubungan yang bermakna secara simultan antara asupan energi, protein, dan vitamin D dengan sarkopenia (0,001).

Kesimpulan: Asupan energi, protein, dan vitamin D, baik secara individu maupun secara bersama-sama memiliki hubungan yang bermakna dengan kejadian sarkopenia pada pasien hemodialisis di RSUD KRT. Setjonegoro.

Kata Kunci: asupan makan, hemodialisis, penyakit ginjal kronis, dan sarkopenia.

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ABSTRACT

Association between Dietary Energy, Protein, and Vitamin D Intake with the Incidence of Sarcopenia in Haemodialysis Patients

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Background: Sarcopenia is a syndrome characterised by low muscle mass accompanied by decreased skeletal muscle strength and/or decreased physical performance that commonly occurs in End Stage Renal Disease (ESRD) patients undergoing dialysis. The dialysis process is related to dietary intake as it can cause muscle shrinkage through changes in the body's protein balance. Deficiencies in energy, protein and vitamin D contribute to the loss of muscle mass and function.

Objective: To determine the relationship between energy, protein and vitamin D intake and the incidence of sarcopenia in ESRD patients undergoing haemodialysis.

Methods: A cross-sectional study was conducted at Setjonegoro Wonosobo Hospital in December 2023. A total of 86 subject was selected using the consecutive sampling technique. Sarcopenia parameters were assessed using BIA, a handgrip strength dynamometer and a stopwatch, and classified based on the 2019 Asian Working Group for Sarcopenia (AWGS) criteria. Dietary intake of energy, protein, and vitamin D was measured using a Semi-Quantitative Food Frequency Questionnaire (SQ-FFQ) questionnaire. Data were analysed using the Mann-Whitney test and Linear Regression Test.

Results: There were 23.3% of subject who experienced sarcopenia. There was a significant relationship between energy intake and sarcopenia (0.000), protein intake and sarcopenia (0.000), and vitamin D intake and sarcopenia (0.002). There was a significant relationship simultaneously between energy, protein, and vitamin D intake and the prevalence of sarcopenia (0.001).

Conclusion: Energy, protein, and vitamin D intake, both individually and together have a significant relationship with the incidence of sarcopenia in haemodialysis patients at KRT. Setjonegoro Hospital.

Keywords: chronic kidney disease, dietary intake, haemodialysis, sarcopenia

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