Korelasi kadar vitamin D serum dengan appendicular skeletal muscle index dan indeks barthel pada pasien stroke = Correlation of serum vitamin D levels with appendicular skeletal muscle index and barthel index in stroke patients

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Abstrak

Latar Belakang: Stroke merupakan penyebab kematian kedua dan penyebab disabilitas ketiga di dunia. Stroke menimbulkan ketidakmampuan dan kelemahan yang berakibat pada penurunan kemampuan fungsional. Kemandirian aktivitas hidup sehari-hari pasien stroke sangat penting karena dapat meningkatkan kualitas hidup. Dari tahun 1990 hingga 2019, telah terjadi peningkatan kejadian stroke sebesar 70%. Selanjutnya stroke sendiri akan menyebabkan peningkatkan angka kematian sebesar 43% dan disability adjusted lifeyears (DALY) sebesar 143%. Penelitian ini bertujuan untuk mehilat hubungan antara kadar vitamin D serum terhadap massa otot bebas lemak pada kedua ektremitas pada pasien stroke dan luaran klinis dengan pada pasien stroke.
Metode: Penelitian menggunakan desain potong lintang pada subjek berusia diatas 18 tahun yang menjalani perawatan di RSUPN Dr. Cipto mangunkusumo dan RS Universitas Indonesia Depok. karakteristik demografi meliputi usia, jenis kelamin, status gizi, jenis kulit, jenis pakaian , asupan vitamin D, pemakaian tabir surya, Indeks Barthel, asupan energi total, asupan protein, asupan lemak, asupan karbohidrat, skor pajanan sinar matahari dan kadar vitamin D serum. Dilakukan analisis hubungan kadar vitamin D serum dengan ASMI dan Indeks Barthel Hasil: Sebagian besar subjek rerata berusia 59 tahun, dengan jenis kelamin perempuan terbanyak. Status gizi 33,3% mengalami obesitas derajat 1 dan 13,3% obesitas derajat 2. Karakteristik subjek memiliki jenis kulit tipe 4 (moderate brown), dan hampir seluruh subjek sebanyak 83,3% tidak memakai tabir surya. Untuk kecupukan asupan, bebagian besar subjek 81,7% memiliki asupan energi total yang cukup, 50% subjek mengalami asupan protein yang kurang, 5% subjek memiliki asupan lemak yang kurang, dan hanya 1,7% subjek yang mengalami asupan karbohidrat yang kurang, disamping itu didapatkan 65% yang mengalami kurangnya asupan bahan makanan sumber vitamin D. Skor pajanan sinar matahari pada hampir seluruh subjek sebesar 81,7% termasuk dalam kategori rendah. Hasil penelitian ini juga didapatkan gambaran 30% sebagian subjek tergolong defisiensi vitamin D, dan 58,3% subjek yang mengalami insufisiensi vitamin D. Sebagian besar subjek pada hasil pemeriksaan ASMI menunjukkan gambaran 83,3% mengalami ASMI yang rendah, dengan proporsi pada subjek laki-laki sebanyak 86,2% dan perempuan sebanyak 80,6%. Untuk Indeks Barthel didapatkan 48,3% subjek mengalami ketergantungan sedang dalam menjalani akitivitas sehari-hari. Kesimpulan: Terdapat korelasi yang bermakna antara kadar vitamin D serum dengan ASMI dan Indeks Barthel.
.....Background: Stroke is the second leading cause of death and the third leading cause of disability in the world. Stroke causes disability and weakness which results in decreased functional ability. Independence of daily living activities of stroke patients is very important because it can improve the quality of life. From 1990 to 2019, there has been a 70% increase in the incidence of stroke. Furthermore, stroke itself will cause an increase in mortality by 43% and disability adjusted lifeyears (DALY) by 143%. This study aims to investigate the relationship between serum vitamin D levels and fat-free muscle mass in both extremities in

stroke patients and clinical outcomes with stroke patients.
Methods: The study used a cross-sectional design on subjects aged over 18 years who underwent treatment at Dr. Cipto Mangunkusumo Hospital and University of Indonesia Hospital Depok. Demographic characteristics include age, gender, nutritional status, skin type, clothing type, vitamin D intake, sunscreen use, Barthel Index, total energy intake, protein intake, fat intake, carbohydrate intake, sun exposure score and serum vitamin D levels. The association of serum vitamin D level with ASMI and Barthel Index was analyzed.
Results: Most of the subjects had an average age of 59 years, with the most female gender. The subjects had a skin type of type 4 (moderate brown), and almost all subjects as much as 83.3% did not wear sunscreen. For intake adequacy, most subjects 81.7% had sufficient total energy intake, 50% of subjects experienced insufficient protein intake, 5% of subjects had insufficient fat intake, and only 1.7% of subjects experienced insufficient carbohydrate intake, besides that 65% experienced insufficient intake of food sources of vitamin D. The sun exposure score in almost all subjects of 81.7% was in the low category. The results of this study also obtained a picture of 30% of subjects classified as vitamin D deficiency, and 58.3% of subjects who experienced vitamin D insufficiency. Most subjects in the ASMI examination results showed a picture of 83.3% experiencing low ASMI, with a proportion in male subjects as much as 86.2% and women as much as 80.6%. For the Barthel Index, 48.3% of subjects experienced moderate dependence in carrying out daily activities.
Conclusion: There is a significant correlation between serum vitamin D levels with ASMI and Barthel Index.