

Korelasi antara kadar vitamin D serum dengan performa fisik pada usia lanjut di panti wreda = Correlation between vitamin D serum levels with physical performance among elderly individuals in nursing homes

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Abstrak

Usia lanjut berisiko tinggi mengalami defisiensi vitamin D, sedangkan vitamin D memiliki efek protektif terhadap massa otot. Penurunan massa otot dan fungsinya disebut dengan sarkopenia. Prevalensi sarkopenia sangat tinggi pada usia lanjut yang tinggal di panti wreda, kondisi ini disebabkan gaya hidup sedentari pada penghuni panti wreda. Deteksi dini sarkopenia dapat dilakukan dengan mengukur fungsi otot, salah satunya adalah mengukur performa fisik dengan tes short physical performance battery (SPPB). Penelitian potong lintang ini bertujuan untuk melihat korelasi antara kadar vitamin D serum dengan performa fisik pada usia lanjut di lima panti wreda yang terdaftar di Kota Tangerang Selatan. Pengambilan subjek dilakukan dengan cara proportional random sampling, didapatkan 100 usila yang memenuhi kriteria penelitian. Pemeriksaan kadar vitamin D menggunakan kadar kalsidiol serum dengan metode chemiluminescence immunoassay (CLIA). Pemeriksaan massa otot menggunakan bioelectric impedance analysis Tanita SC-330. Analisis korelasi menggunakan uji nonparametrik. Didapatkan nilai tengah usia subjek adalah 74,89 tahun dan 72% subjek adalah perempuan. Terdapat 85% subjek memiliki asupan vitamin D yang kurang dan 94% subjek memiliki skor pajanan sinar matahari yang rendah, serta seluruh subjek masih memiliki massa otot yang normal. Nilai tengah kadar vitamin D serum adalah 15,50(4-32) ng/mL, dengan 72% subjek mengalami defisiensi vitamin D. Nilai tengah performa fisik adalah 9(3-12) dan sebanyak 47% subjek mengalami performa fisik yang buruk. Hasil penelitian ini menunjukkan bahwa tidak terdapat korelasi antara kadar vitamin D serum dengan performa fisik pada usia lanjut di panti wreda ($r=0,130$; $p=0,196$).

.....Elderly individuals have a risk of vitamin D deficiency, whereas vitamin D has a protective effect on muscle mass. Decrease in muscle mass and function is called sarcopenia. The prevalence of sarcopenia is very high in the elderly who live in nursing homes, this condition is due to the sedentary lifestyle. Early detection of sarcopenia can be done by measuring physical performance with short physical performance battery (SPPB) test. This cross-sectional study aimed to explore the correlation between vitamin D serum levels with physical performance among elderly individuals in five nursing homes registered in South Tangerang. A hundred subjects who fulfilled study criteria gathered using proportional random sampling method. Examination of vitamin D levels using calcidiol serum with the chemiluminescence immunoassay (CLIA) method. Muscle mass was measured using bioelectric impedance analysis Tanita type SC-330. Nonparametric correlation was used for correlation analysis. Median age of subjects was 74.89 years old and 72% were female. Eighty-five percent of subjects had low vitamin D intake, 94% of subjects had low sun exposure score, and all subjects had normal muscle mass. Mean level of vitamin D serum was 15.50 (4-32) ng/mL, with 72% of subjects had vitamin D deficiency. Mean score of physical performance was 9(3-12) and 47% of subjects had low physical performance. This study showed that there was no correlation found between vitamin D serum levels with physical performance among elderly individuals in nursing homes ($r=0.130$; $p=0.196$).