Hubungan indeks massa otot dengan status frailty pada pasien geriatri di rawat jalan = Association of appendicular lean mass with frailty syndrome among geriatric outpatients.

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Abstrak

Latar Belakang: Meningkatnya populasi geriatri membuat sindrom frailty akan banyak ditemui di praktik klinik sehari-hari. Fenotip frailty dikaitkan dengan rendahnya massa otot secara teori, namun masih terdapat perbedaan hasil di antara penelitian yang ada.
Tujuan: Mengetahui rerata indeks massa otot pada populasi geriatri di rawat jalan dan hubungannya dengan status frailty.
Metode: Penelitian menggunakan desain potong lintang terhadap pasien berusia ≥60 tahun di poliklinik Geriatri Rumah Sakit Cipto Mangunkusumo, periode waktu April-Juni 2018. Dilakukan pengambilan data antropometri, pengisian kuesioner Cardiovascular Health Study (CHS) dan pengukuran indeks massa otot dengan dual energy X-ray absoprtiometry (DXA). Parameter indeks massa otot diukur berdasarkan appendicular lean mass (ALM) yang disesuaikan dengan tinggi badan (ALM/TB2) dan indeks massa tubuh (ALM/IMT).
Hasil: Didapatkan proporsi subjek frail, pre-frail dan robust berdasarkan skor CHS berturut-turut adalah 29,17%, 58,33% dan 12,5%. Terdapat perbedaan rerata indeks massa otot dengan parameter ALM/TB2 antara pasien yang frail dan yang tidak (6,54 (1,01) Kg/m2 vs 7,03 (0,91) Kg/m2; p=0,01), namun tidak halnya dengan ALM/IMT (p=0,72). Tidak terdapat hubungan yang bermakna baik antara kejadian sindrom frailty dengan indeks massa otot ALM/TB2 (PR 2,03; 95% IK 0,80-5,15; p=0,13) maupun ALM/IMT (PR 5,09; 95% IK 0,45-58,06; p=0,2). Dari analisis multivariat faktor perancu didapatkan hubungan bermakna antara nutrisi (PR 3,67; 95% IK 1,59-8,49; p=0,02) dan status fungsional (PR 4,94; 95% IK 2,01-11,75; p=0,00) dengan kejadian sindrom frailty.
Simpulan: Indeks massa otot yang rendah saja tidak dapat dijadikan faktor prediktif terjadinya sindrom frailty, melainkan perlu digabungkan dengan parameter lain seperti kualitas atau fungsi otot, status fungsional dan nutrisi. Penggunaan indeks massa otot dengan parameter ALM/TB2 lebih disarankan.
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Background: Population ageing worldwide is rapidly accelerating along with development of frailty syndrome. A theoretical link between frailty and low lean mass has been established, and low lean mass as frailty predictor, but studies conducted show inconclusive result.
Objectives: To obtain appendicular lean mass values among geriatric outpatients and its association with frailty status.
Methods. Cross-sectional study conducted to elderly patients (≥60 years old) in the Geriatric Outpatient Clinic of Cipto Mangunkusumo National Referral Hospital in April-June 2018. Each subject underwent anthropometric measurement, frailty evaluation using Cardiovascular Health Study (CHS) questionnaire dan lean mass measurement using dual energy X-ray absoprtiometry (DXA). Appendicular lean mass (ALM) measured was adjusted by height squared (ALM/ht2) and BMI (ALM/BMI)
Results: The proportion of frail, pre-frail and robust according to CHS were 29,17%, 58,33% and 12,5%

respectively. We found significant difference in ALM/ht2 between frail dan non-frail subjects (6.54 (1.01) Kg/m2 vs. 7.03 (0,91) Kg/m2; p=0.01) but nonsignificant result for ALM/BMI (p=0.72). No association was found between frailty and muscle mass index of ALM/ht2 (PR 2.03; 95%CI 0.80-5.15; p=0.13) or ALM/BMI (PR 5.09; 95% CI 0.45-58.06; p=0.2). From multivariate analysis, there was significant association between nutritional status (PR 3,67; 95% CI 1,59-8,49; p=0,02), functional status (PR 4,94; 95% CI 2,01-11,75; p=0,00) and frailty.

Conclusion: Low lean mass alone cannot be used as predictive factor for frailty syndrome, further analysis using another parameter such muscle's quality or function, nutritional status and functional status are needed. This study supports ALM/ht2 as chosen muscle index.