ABSTRAK

LINGKAR BETIS SEBAGAI ALAT SKRINING KERAPUHAN PADA LANSIA

Anria Maswita[1], Hertanto Wahyu Subagio[2], Amalia Sukmadianti[2], Darmono SS[2], Khairuddin[2]

[1]Peserta Program Pendidikan Dokter Spesialis Gizi Klinis, Fakultas Kedokteran UNDIP
[2] Staf Program Pendidikan Dokter Spesialis Gizi Klinis, Fakultas Kedokteran UNDIP

Latar belakang: Kerapuhan adalah sindrom geriatri yang umum terjadi pada orang lanjut usia, namun metode sederhana untuk menilai tingkat kerapuhan pada lansia belum ditemukan. Penelitian ini bertujuan untuk menganalisis akurasi lingkar betis dalam memprediksi kerapuhan pada lansia.

Metode penelitian: Penelitian melibatkan 110 lansia usia $\geq$ 60 tahun yang dipilih secara *consecutive sampling* di rumah pelayanan sosial lanjut usia Pucang Gading Semarang yang memenuhi kriteria inklusi. Massa otot dinilai menggunakan lingkar betis diukur dengan pita pengukur dan tingkat kerapuhan dinilai dengan menggunakan *Frailty Index* (FI-40). Analisis dilakukan sesuai kurva *receiver operating characteristic* (ROC) untuk menentukan titik potong beserta nilai sensitivitas (Se) dan spesifisitas (Sp), nilai prediksi positif (NPP), nilai prediksi negatif (NPN) dan akurasi lingkar betis dalam memprediksi kerapuhan pada lansia.

Hasil penelitian: Sebanyak 60 subjek (54,5%) dari 110 subjek mengalami rapuh. Nilai batas lingkar betis untuk memprediksi rapuh $\leq$ 29,75 cm pada laki-laki (Se 86,2%, Sp 83,3%, NPP 89,3%, NPN 78,9%, akurasi 85,1%) dan $\leq$ 28,25 cm pada perempuan (Se 80,7%, Sp 78,1%, NPP 78,1%, NPN 80,7%, akurasi 79,4%).

Simpulan: Lingkar betis adalah metode ukur yang sederhana dan akurat untuk memprediksi kerapuhan pada lansia.

Kata kunci: lingkar betis, kerapuhan, lansia

ABSTRACT

CALF CIRCUMFERENCE AS A SCREENING TOOL FOR FRAILTY IN THE ELDERLY

Anria Maswita[1], Hertanto Wahyu Subagio[2], Amalia Sukmadianti[2], Darmono SS[2], Khairuddin[2]

[1]Participant of the Clinical Nutrition Specialist Education Program, Faculty of Medicine UNDIP
[2]Staff of the Clinical Nutrition Specialist Medical Education Program, Faculty of Medicine UNDIP

Background*: Frailty is a common geriatric syndrome in elderly people, but a simple method to assess the degree of frailty in the elderly has not been established. This study aims to analyze the accuracy of calf circumference in predicting frailty in the elderly.*

Methods : *The study participants were 110 elderly people aged $\geq$ 60 years who were selected by consecutive sampling at the Pucang Gading social service home in Semarang who met the inclusion criteria. Muscle mass was assessed using calf circumference measured with a tape measure and the level of fragility was assessed using the Frailty Index (FI-40). Analysis was performed according to receiver operating characteristic (ROC) curves to determine cut-off points along with sensitivity (Se) and specificity (Sp) values, positive predictive value (NPP), negative predictive value (NPN) and accuracy of calf circumference in predicting frailty in the elderly.*

Results*: A total of 60 subjects (54.5%) out of 110 subjects were frail. The cut-off value for calf circumference to predict frail was $\leq$ 29.75 cm in males (Se 86.2%, Sp 83.3%, PPV 89.3%, NPV 78.9%, accuracy 85.1%) and $\leq$ 28.25 cm in females (Se 80.7%, Sp 78.1%, PPV 78.1%, NPV 80.7%, accuracy 79.4%).*

Conclusion*: Calf circumference is a simple and accurate measurement method to predict frailty in the elderly.*

Keywords*: calf circumference, frailty, elderly*