Hubungan Indeks Massa Tubuh dengan Kekuatan Otot Quadriceps pada Pasien Obesitas dengan Osteoartritis Genu = Correlation between Body Mass Index (BMI) and Quadriceps Muscle Strength in Obese Patients with Knee Osteoarthritis

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Abstrak

Obesitas merupakan suatu trend yang semakin banyak di dunia. Hal ini terjadi karena banyak faktor seperti junk food, globalisasi, dan penurunan aktivitas fisik. Obesitas sendiri merupakan faktor terbesar terjadinya Osteoartritis (OA) lutut. Otot quadriceps adalah salah satu otot yang melindungi sendi lutut. Pasien OA lutut ditemukan memiliki kelemahan otot quadriceps. Hubungan antara obesitas dan OA lutut serta hubungan antara OA lutut dengan kekuatan otot quadriceps sudah banyak diteliti, namun hubungan antara IMT dan kekuatan otot quadriceps masih belum jelas. Penelitian ini diadakan dengan tujuan untuk mengetahui hubungan antara Indeks Massa Tubuh (IMT) dengan kekuatan otot quadriceps pada pasien obesitas dengan OA lutut. Penelitian ini menggunakan desain studi cross-sectional secara analitik. Populasi subjek penelitian merupakan pasien obesitas dengan OA lutut di poli Rehabilitasi Medik RSCM. Data subjek penelitian diambil dari rekam medis elektronik lalu diskrining menggunakan kriteria eligibilitas sehingga didapatkan 18 subjek penelitian berdasarkan jumlah minimum sampel. Analisis data digunakan korelasi spearman di software SPSS. Hubungan dinyatakan bermakna secara statistik apabila $p<0.05$. Proses analisis data dengan korelasi spearman pada variabel Indeks Massa Tubuh (IMT) dan kekuatan otot quadriceps menghasilkan nilai $p<0.05$ dengan nilai rho -0,498. Hasil dari analisis data menunjukkan bahwa terdapat inverse correlation antara Indeks Massa Tubuh (IMT) dan kekuatan otot quadriceps yang bermakna secara statistic, maka semakin besar IMT seseorang, semakin lemah kekuatan otot quadriceps subjek pada populasi pasien obesitas dengan OA lutut.

......Obesity is an increasing trend in today's world. This happens because various factors such as increase in availability of junk food, globalization, and decrease in physical activity. Obesity is one of the biggest risk factor for knee OA. Quadriceps muscle is one of the muscle that protects the knee joint. There is a lot of findings of weakening in quadriceps muscle strength in knee OA patients. There is a lot of evidence for the correlation of obesity and knee OA, there is also a lot of evidence for the correlation of knee OA and quadriceps muscle strength, but there is very little evidence for the correlation between BMI and quadriceps muscle strength. This study is made to find the correlation between BMI and quadriceps muscle strength in obese patients with knee OA. This study has an analytic cross-sectional design. The population of this study's subject is obese patients with knee OA in the Department of Medical Rehabilitation of dr. Cipto Mangunkusumo Hospital. Subject's data is acquired through electronic medical records and then screened using a particular eligibility criteria. This study acquired 18 subjects according to the minimum study sample. Data was analysed using spearman correlation in SPSS software. The correlation is stated statistically significant if $p<0,05$. Data analysis using spearman correlation to search for the correlation between BMI variable and quadriceps muscle strength variable shows a result with $p<0.05$ and a rho of -0,498. Based on the results of data analysis, it can be concluded that there is an inverse correlation between BMI and quadriceps muscle strength that's statistically significant. Therefore, in obese patients with knee

OA, the higher the BMI means the lower the strength of quadriceps muscle is.