

Hubungan leptin dengan cartilage oligometric matrix protein dan lebar celah sendi tibiofemoral medial pada pasien osteoarthritis lutut dengan obesitas = Correlation of leptin with cartilage oligometric matrix protein (COMP) and medial tibiofemoral joint space width in knee osteoarthritis (OA) with obesity / Sandra Sinthya Langow

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Abstrak

ABSTRAK

Latar Belakang: Obesitas merupakan faktor risiko utama osteoarthritis (OA). Penelitian terdahulu mendapatkan bahwa faktor mekanik saja tidak cukup untuk menjelaskan hubungan kejadian OA dengan obesitas. Leptin diduga berperan dalam proses destruksi kartilago pada OA. Tujuan penelitian ini adalah untuk melihat adakah korelasi antara leptin serum dengan COMP dan dengan lebar celah sendi tibiofemoral medial.

Metode: Penelitian ini merupakan studi potong lintang pada penderita OA yang berobat di poliklinik Reumatologi RSCM dalam periode Juni-Juli 2014. Pengambilan sampel dilakukan dengan metode consecutive sampling. Diagnosis OA lutut berdasarkan kriteria American College of Rheumatology (ACR) 1896. Dilakukan pemeriksaan leptin dan COMP serum dengan metode ELISA. Pemeriksaan radiologi kedua lutut dilakukan dengan posisi antero-posterior pada pasien yang berdiri tegak. Kemudian dilakukan pengukuran lebar celah sendi tibiofemoral medial oleh ahli radiologi, Analisa statistik bivariat digunakan mendapatkan korelasi antara leptin dengan COMP dan dengan lebar celah sendi tibiofemoral medial.

Hasil: Sebanyak 51 subjek memenuhi kriteria inklusi penelitian, 45 orang (88,2%) adalah wanita. Rerata kadar leptin didapatkan $38119,45 \pm 21076,09$ pg/ml. Nilai median COMP adalah $805,3(144,1-2241)$ ng/ml dan rerata lebar celah sendi tibiofemoral medial $3,73 \pm 1,58$ mm. Pada analisa bivariat tidak ditemukan korelasi antara leptin dan COMP ($r = 0,043$, $p = 0,764$) dan juga antara leptin dengan lebar celah sendi tibiofemoral medial ($r = -0,135$, $p = 0,345$). Pada subjek dengan lama sakit > 24 bulan didapatkan korelasi negatif kuat antara leptin dengan lebar celah sendi tibio femoral medial ($r = 0,614$, $p = 0,015$).

Simpulan: Tidak didapatkan korelasi antara leptin dan COMP pada penelitian ini. Penelitian ini juga tidak mendapatkan korelasi antara leptin dengan lebar celah sendi tibiofemoral medial pada pasien OA lutut dengan obesitas.

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ABSTRACT

Background: Obesity is a well-recognized risk factor for osteoarthritis. However, the relationship between obesity and OA may not simply due to mechanical factor. Increasing evidence support the role of leptin in OA cartilage destruction. The objective of this study was to examine the possible correlation between leptin serum with COMP and medial joint space width in knee OA with obesity. Methods: This study was a cross sectional study in OA patients visiting Rheumatology outpatient clinic in Cipto Mangunkusumo Hospital between June- July 2014. Samples were collected using consecutive sampling method. Knee OA was diagnosed from clinical and radiologic evaluation based on American College of Rheumatology 1986 criteria. Serum was collected from 51 knee OA patients, serum leptin and COMP were measured by ELISA.

Antero-posterior radiographs of the knee have been taken in weight bearing position, and then the radiologist measured the minimum medial joint space width. The correlation between leptin and same variables, such as COMP and tibiofemoral medial minimum joint space width were analyzed by bivariate analysis.

Results: Fifty one subjects met the inclusion criteria, with 45 (88,2%) are women. Mean of Leptin was 38119,45 (SD 21076,09). Median of COMP was 805,3(144,1-2241) and mean of minimum joint space width was 3,73 (SD1,58) mm. In bivariate analysis we found no correlation between leptin and COMP ($r = 0,043$, $p = 0,764$) and also between leptin and medial joint space width ($r = - 0,135$, $p = 0,345$).Cluster analysis for the subject with disease onset >24 month showed strong negative correlation between leptin and tibiofemoral medial minimum joint space width ($r = 0,614$, $p = 0,015$).

Conclusion: There was no correlation between leptin and COMP in this study. This study also showed that there was no correlation between leptin and medial tibiofemoral joint space width in knee OA with obesity.