

## Gambaran leptin serum dan interleukin-1 $\beta$ cairan sendi pasien osteoarthritis lutut wanita dengan obesitas sentral = Profile of serum leptin and IL-1 synovial fluid in central obesity with knee osteoarthritis woman patients

Fachrul Razy, author

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### Abstrak

Latar Belakang: Obesitas merupakan faktor resiko terjadinya osteoarthritis (OA). Penelitian terdahulu bahwa faktor mekanik belum cukup untuk menjelaskan hubungan OA dengan obesitas. Faktor resiko ini dapat menurunkan fungsi dan aktifitas fisik pasien OA. Lemak visceral tempat ditemukan White Adipose Tissue (WAT), dapat mengeluarkan hormon leptin, dan leptin dapat mensekresi sitokin proinflamasi yang berdampak pada degradasi kartilago sendi, yang diduga berhubungan dengan kejadian OA

Tujuan: Mendapatkan gambaran leptin serum dan kadar IL-1 cairan sendi pasien OA lutut wanita dengan obesitas sentral.

Metode: Studi potong lintang pada pasien OA lutut wanita yang berobat di poliklinik Rheumatologi RSCM dalam kurun waktu Maret–Juli 2017. Pengambilan sampel dilakukan secara berturutan. Diagnosis OA lutut berdasarkan kriteria ACR 1986. Dilakukan pemeriksaan lemak visceral dengan menggunakan alat BIA Karada Scan .HBF 375. Pemeriksaan leptin serum dan IL-1 $\beta$  cairan sendi dengan metode ELISA.

Hasil: Didapatkan 22 subjek wanita yang memenuhi kriteria penelitian. Nilai median lemak visceral 12,5 (5 – 27,5 ) %, nilai median leptin serum 19735,5 (2998–81782) pg/ml, dan nilai median IL-1 $\beta$  1,23 (0,76 – 6,11).

Simpulan: Didapatkan kadar rerata leptin serum 19735,5 (2998-81782) pg/ml dan rerata kadar IL-1 cairan sendi 1,23 ( 0,76 – 6,11).

.....Background: Obesity is a well recognized risk faktor for osteoarthritis. However, the relationship between obesity and OA may not simply due to mechanical factor, may be a risk factor for declining function and physical activity. Visceral fat is that founded white adipocyte tissue is product quantities of leptin. It's to secrete higher levels of proinflammatory cytokine and implicated in cartilage degradation. The aim: of this study was to examine Profile of serum leptin and IL-1 synovial fluid in central obesity with knee osteoarthritis woman patients

Methods: This study was cross sectional study in OA patients visiting Rheumatology outpatients clinic in Cipto Mangunkusumo Hospital during March – July 2017. Sample were collected using consecutive sampling method. Knee OA diagnosed according to the 1986 American College of Rheumatology criteria. Visceral fat were measred by BIA Karada Scan HBF 375. Blood serum and synovial fluid was collected from 22 knee OA patients, serum leptin and synovial fluid were measured by ELISA,

Results : Of twenty two subjects met the inclusion criteria, median of visceral fat was 12,5 (5 – 27,5) % and median of serum leptin was 19735,5 ( 2998 – 81782) pg/ml and median of IL-1 was 1,23 ( 0,76 - 6,11) pg/ml.

Conclusion: :Serum leptin was 19735,5 (2998 – 81782) pg/ml and median of IL-1 was 1,23 ( 0,76 - 6,11) pg/ml.