

ABSTRACT

THE RELATIONSHIP BETWEEN BODY MASS INDEX AND THE RADIOLOGICAL SEVERITY OF KELLGREN-LAWRENCE IN FEMALE KNEE OSTEOARTHRITIS PATIENTS AT DR. H. ABDUL MOELOEK HOSPITAL

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Background: A high Body Mass Index (BMI) is suspected to exacerbate knee osteoarthritis through increased mechanical load and chronic inflammatory mechanisms. Women have a higher risk of developing osteoarthritis due to postmenopausal hormonal influences. This study aimed to determine the relationship between BMI and the radiological severity of Kellgren-Lawrence grading in female patients with knee osteoarthritis at RSUD Dr. H. Abdul Moeloek

Method : This was an observational analytic study with a cross-sectional design using medical record data of female patients with knee osteoarthritis during the 2022–2025 period at Dr. H. Abdul Moeloek General Hospital. A total of 47 samples were selected using a total sampling technique. The independent variable was BMI, and the dependent variable was the radiological severity of Kellgren-Lawrence grading. Data were analyzed using the Spearman Rank Correlation test with a significance level of $\alpha = 0.05$.

Result: The majority of patients were categorized as severely overweight (25 patients; 53.2%), and radiological severity grades were grade 3 and grade 4, each consisting of 16 patients (34%). The Spearman test showed a significant relationship ($p = 0.001$) with a very strong positive correlation ($r = 0.823$) between Body Mass Index and the radiological severity of Kellgren-Lawrence grading.

Conclusion: There is a significant and very strong correlation between BMI and the radiological severity of Kellgren-Lawrence in female knee osteoarthritis patients at RSUD Dr. H. Abdul Moeloek Hospital.

Keywords: Body Mass Index, Kellgren-Lawrence, knee osteoarthritis, radiological, women.

ABSTRAK

HUBUNGAN INDEKS MASSA TUBUH DENGAN DERAJAT KEPARAHAN RADIOLOGIS KELLGREN-LAWRENCE PADA PASIEN OSTEOARTRITIS LUTUT WANITA DI RSUD DR. H. ABDUL MOELOEK

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Latar Belakang: Indeks Massa Tubuh (IMT) yang tinggi diduga memperberat osteoarthritis lutut melalui peningkatan beban mekanik dan mekanisme inflamasi. Wanita memiliki risiko lebih tinggi mengalami osteoarthritis akibat pengaruh hormonal pascamenopause. Penelitian ini bertujuan untuk mengetahui hubungan antara IMT dengan derajat keparahan radiologis Kellgren-Lawrence pada pasien osteoarthritis lutut wanita di RSUD Dr. H. Abdul Moeloek.

Metode: Penelitian ini merupakan penelitian analitik observasional dengan desain cross-sectional yang menggunakan data dari rekam medis pasien osteoarthritis lutut wanita periode 2022–2025 di RSUD Dr. H. Abdul Moeloek. Jumlah sampel sebanyak 47 orang yang dipilih dengan teknik *total sampling*. Variabel bebas Adalah IMT dan variabel terikat adalah derajat keparahan radiologis Kellgren-Lawrence. Analisis data dilakukan menggunakan uji *Spearman Rank Correlation* dengan signifikansi $\alpha = 0,05$.

Hasil: Mayoritas pasien berada pada kategori kelebihan berat badan tingkat berat 25 orang (53,2%) dan derajat keparahan OA pada grade 3 dan 4 masing-masing 16 orang (34%). Hasil uji Spearman menunjukkan terdapat hubungan yang signifikan ($p=0.001$) serta korelasi positif sangat kuat ($r=0,823$) antara indeks massa tubuh dengan derajat keparahan radiologis Kellgren-Lawrence.

Kesimpulan: Terdapat hubungan signifikan dan korelasi sangat kuat antara indeks massa tubuh dengan derajat keparahan radiologis Kellgren-Lawrence pada pasien osteoarthritis lutut wanita di RSUD Dr. H. Abdul Moeloek.

Kata kunci: Indeks Massa Tubuh, Kellgren-Lawrence, Osteoarthritis Lutut, Radiologis, Wanita