

## Kadar Serum *Gamma Glutamyltransferase* pada Lansia Obesitas Abdominal

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### ABSTRAK

**Latar Belakang** : Obesitas abdominal terkait dengan sejumlah gangguan metabolik yang menyebabkan penyakit kronis salah satunya yaitu *Non-Alcoholic Fatty Liver Disease* (NAFLD). Serum GGT merupakan indikator yang paling sensitif untuk kerusakan hati dan berhubungan erat dengan obesitas abdominal dan NAFLD.

**Tujuan** : Penelitian ini bertujuan untuk mengetahui kadar serum GGT dan menganalisis hubungan kadar serum GGT dengan derajat obesitas abdominal, usia, jenis kelamin, dan aktivitas fisik pada lansia obesitas abdominal.

**Metode** : Desain penelitian *cross sectional* pada 45 subjek yang dipilih dengan *purposive sampling*. Derajat obesitas abdominal diukur dengan lingkaran pinggang. Kadar serum GGT diuji menggunakan metode spektrofotometri enzimatis. Data diri, riwayat penyakit, riwayat konsumsi obat diperoleh melalui wawancara dan data aktivitas fisik menggunakan *International Physical Activity Questionnaire* (IPAQ). Analisis data dengan menggunakan uji *rank Spearman*, *Mann Whitney*, *general linear model*.

**Hasil** : Rerata kadar serum GGT ( $31,4 \pm 24,02$  U/L). Sebanyak 37,7% subjek memiliki kadar serum GGT yang tinggi. Terdapat perbedaan rerata kadar serum GGT berdasarkan jenis kelamin ( $p=0,031$ ). Hubungan antara lingkaran pinggang ( $r=0,467$ ,  $p=0,001$ ) dan aktivitas fisik ( $r=-0,432$ ,  $p=0,003$ ) dengan kadar serum GGT.

**Simpulan** : Sebanyak 37,7% subjek memiliki kadar serum GGT yang tinggi, rerata kadar serum GGT yaitu  $31,4 \pm 24,02$  U/L. Terdapat hubungan positif signifikan antara lingkaran pinggang dengan kadar serum GGT. Terdapat hubungan negatif signifikan antara aktivitas fisik dengan kadar serum GGT pada lansia obesitas abdominal.

**Kata Kunci** : Kadar serum GGT, lansia, obesitas abdominal

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## **Serum Gamma Glutamyltransferase Level in Elderly with Abdominal Obesity**

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### **ABSTRACT**

**Background** : Abdominal obesity is associated with a number of metabolic disorders that lead to chronic diseases, including non-alcoholic fatty liver disease (NAFLD). Serum GGT is the most sensitive indicator of liver damage and is closely related to abdominal obesity and NAFLD.

**Objective** : This study aims to determine serum GGT levels and analyze the relationship between serum GGT levels and abdominal obesity, age, gender and physical activity in obese elderly people.

**Methods** : Cross-sectional research design on 45 subjects selected by purposive sampling method. The level of abdominal obesity is measured by waist circumference. Serum GGT levels were tested using the enzymatic spectrophotometric method. Personal data, medical history, and drug use were collected through interviews and physical activity data using the International Physical Activity Questionnaire (IPAQ). Data analysis using the Spearman rank test, Mann Whitney, general linear model.

**Results** : Mean serum GGT level ( $31,4 \pm 24,02$  U/L). A total of 37,7% of subjects had elevated serum GGT levels. There was a difference in mean serum GGT levels by sex ( $p=0,031$ ). Association between waist circumference ( $r=0,467$ ,  $p=0,001$ ) and physical activity ( $r= -0,432$ ,  $p=0,003$ ) with serum GGT levels.

**Conclusion** : Up to 37.7% of subjects had elevated serum GGT levels, the mean serum GGT level was  $31,4 \pm 24,02$  U/L. There was a significant positive relationship between waist circumference and serum GGT levels. There is a significant negative relationship between physical activity and serum GGT levels in elderly people with abdominal obesity.

**Keywords** : : GGT serum levels, elderly, abdominal obesity

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