

ABSTRAK

PENGARUH PERUBAHAN MASSA LEMAK TUBUH TERHADAP PERUBAHAN KADAR GLUKOSA DARAH PADA IBU HAMIL DI SEMARANG

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Latar belakang: Perubahan kadar glukosa darah pada ibu hamil trimester 2 ditentukan oleh berbagai faktor diantaranya adalah massa lemak tubuh. Peningkatan kadar glukosa darah pada ibu hamil dapat berdampak pada glukosa darah ibu dan anak di masa mendatang. Penelitian ini bertujuan untuk mengidentifikasi pengaruh perubahan massa lemak tubuh terhadap kadar glukosa darah pada ibu hamil di Semarang.

Metode penelitian: Penelitian potong lintang ibu hamil trimester 1 yang kontrol di Puskesmas Gayamsari, Puskesmas Tlogosari Kulon, Puskesmas Tlogosari Wetan, dan Puskesmas Pagendan pada bulan Agustus – Desember 2023. Data komposisi tubuh diambil menggunakan alat *bioelectrical impedance analyzer* pada trimester 1 dan 2. Data glukosa darah diukur dengan *Auto Chemistry Analyzer CS-T180*.

Hasil penelitian: Sebanyak 55 subjek memenuhi kriteria inklusi dan eksklusi. Terdapat perbedaan glukosa darah, berat badan, massa lemak, massa otot, dan indeks massa tubuh pada trimester 1 dan 2 ($p < 0,05$). Terdapat hubungan peningkatan massa otot terhadap perubahan glukosa darah pada trimester 1 dan 2 ($p < 0,001$; $r = .017$). Tidak terdapat hubungan antara perubahan massa lemak, indeks massa tubuh, dan status paritas.

Simpulan: Perubahan lemak tubuh tidak mempengaruhi perubahan kadar glukosa darah ibu hamil pada trimester 1 dan 2 di Semarang.

Kata kunci: Glukosa darah, massa lemak, ibu hamil, Semarang

ABSTRACT

RELATIONSHIP BETWEEN CHANGES IN BODY FAT MASS AND CHANGES IN BLOOD SUGAR LEVELS IN PREGNANT WOMEN IN SEMARANG

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Background: Changes in blood glucose levels in pregnant women during the second trimester are determined by various factors, one of which is body fat mass. Increased blood glucose levels in pregnant women can affect the future blood sugar of both the mother and the child. This study aims to identify the influence of changes in body fat mass on blood glucose levels in pregnant women in Semarang.

Methods: A cross-sectional study of first-trimester pregnant women who attended Puskesmas Gayamsari, Puskesmas Tlogosari Kulon, Puskesmas Tlogosari Wetan, and Puskesmas Pagendan from August to December 2023. Body composition data were collected using a bioelectrical impedance analyzer in the first and second trimesters. Blood glucose data were measured using an Auto Chemistry Analyzer CS-T180.

Results: A total of 55 subjects met the inclusion and exclusion criteria. There were differences in blood glucose, body weight, fat mass, muscle mass, and body mass index in the first and second trimesters ($p < 0.05$). There was a relationship between increased muscle mass and changes in blood glucose in the first and second trimesters ($p < 0.001$; $r = .017$). There was no relationship between changes in fat mass, body mass index, and parity status.

Conclusion: Changes in body fat do not affect changes in blood glucose levels in pregnant women during the first and second trimesters in Semarang.

Keywords: Blood glucose, body fat mass, pregnant women, Semarang