

HUBUNGAN INDEKS MASSA TUBUH DENGAN KADAR ASAM URAT PADA REMAJA

The Relationship Between Body Mass Index and Uric Acid Levels in Adolescents

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ABSTRAK

Latar Belakang: Peningkatan kadar asam urat yang umumnya ditemukan pada usia dewasa mulai dijumpai pada remaja seiring perubahan pola makan, aktivitas fisik, dan status gizi. Indeks Massa Tubuh (IMT) diduga berkaitan dengan kadar asam urat, tetapi hasil penelitian sebelumnya masih menunjukkan perbedaan, sehingga penelitian pada kelompok remaja perlu dilakukan. **Tujuan:** Mengetahui hubungan IMT dengan kadar asam urat pada remaja. **Metode:** Penelitian kuantitatif dengan desain analitik observasional dan pendekatan *cross-sectional* dilaksanakan di Laboratorium Kimia Klinik STIKES Wira Medika Bali pada Februari–Mei 2026. Populasi terdiri atas 64 mahasiswa reguler Program Studi Teknologi Laboratorium Medis Program Sarjana Terapan. Sebanyak 39 responden dipilih menggunakan *purposive sampling*. IMT diperoleh melalui pengukuran berat dan tinggi badan, sedangkan kadar asam urat diperiksa menggunakan metode *Point of Care Testing*. Data dianalisis menggunakan uji *Shapiro–Wilk* dan korelasi *Rank Spearman*. **Hasil:** Rata-rata IMT responden sebesar 21,518 kg/m² dan rata-rata kadar asam urat sebesar 5,426 mg/dL. Analisis menunjukkan hubungan positif bermakna dengan kekuatan sedang antara IMT dan kadar asam urat ($r=0,489$; $p=0,002$). **Simpanan:** Semakin tinggi IMT, semakin tinggi kecenderungan kadar asam urat pada remaja. Pemeliharaan berat badan normal melalui pola makan seimbang dan aktivitas fisik teratur penting untuk mencegah hiperurisemia sejak dini.

Kata kunci: indeks massa tubuh, kadar asam urat, remaja, hiperurisemia, Point of Care Testing

ABSTRACT

Background: Elevated uric acid levels, which are commonly found in adults, are now being observed in adolescents due to changes in dietary patterns, physical activity, and nutritional status. Body Mass Index (BMI) is thought to be associated with uric acid levels, but previous studies have yielded conflicting results; therefore, research on this adolescent population is needed. **Objective:** To determine the relationship between BMI and uric acid levels in adolescents. **Methods:** A quantitative study with an analytical observational design and a cross-sectional approach was conducted at the Clinical Chemistry Laboratory of STIKES Wira Medika Bali between February and May 2026. The study population consisted of 64 full-time students on the Applied Bachelor's Degree Programme in Medical Laboratory Technology. A total of 39 respondents were selected using *purposive sampling*. BMI was calculated from measurements of weight and height, whilst uric acid levels were assessed using the *Point of Care Testing* method. The data were analysed using the *Shapiro–Wilk* test and *Spearman's rank correlation*. **Results:** The respondents' mean BMI was 21.518 kg/m² and the mean uric acid level was 5.426 mg/dL. The analysis revealed a statistically significant positive correlation of moderate strength between BMI and uric acid levels ($r = 0.489$; $p = 0.002$). **Conclusion:** The higher the BMI, the greater the tendency for elevated uric acid levels in adolescents. Maintaining a normal body weight through a balanced diet and regular physical activity is important for preventing hyperuricaemia from an early age.

Keywords: body mass index, uric acid levels, adolescents, hyperuricaemia, point-of-care testing