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“HUBUNGAN SGOT, SGPT, DAN RASIO SGOT/SGPT DENGAN TINGKAT KEPARAHAN DENGUE PASIEN DI RSUD LABUANG BAJI MAKASSAR PERIODE TAHUN 2024“

ABSTRAK

Latar Belakang: Infeksi dengue masih menjadi masalah kesehatan masyarakat yang signifikan di Indonesia, dengan spektrum klinis yang luas mulai dari demam ringan hingga dengue berat yang ditandai dengan kebocoran plasma, perdarahan, gangguan organ, dan syok. Keterlibatan organ hati sering ditemukan pada pasien dengue dan ditandai dengan peningkatan enzim transaminase, yaitu Serum Glutamic Oxaloacetic Transaminase (SGOT) dan Serum Glutamic Pyruvic Transaminase (SGPT). Rasio SGOT/SGPT juga diduga dapat mencerminkan derajat kerusakan hepatoseluler. Namun, data mengenai hubungan parameter tersebut dengan tingkat keparahan dengue pada tingkat rumah sakit masih terbatas. **Tujuan:** Penelitian ini bertujuan untuk menganalisis hubungan kadar SGOT, kadar SGPT, dan rasio SGOT/SGPT dengan tingkat keparahan pasien dengue di RSUD Labuang Baji Makassar tahun 2024. **Metode:** Penelitian ini merupakan studi observasional analitik dengan pendekatan cross-sectional. Data diperoleh dari rekam medis pasien dengue terkonfirmasi yang dirawat pada tahun 2024 menggunakan teknik consecutive sampling. Nilai SGOT dan SGPT diperoleh dari hasil pemeriksaan laboratorium saat masuk rumah sakit, kemudian dihitung rasio SGOT/SGPT. Tingkat keparahan dengue diklasifikasikan berdasarkan kriteria WHO menjadi dengue tanpa tanda bahaya dan dengue berat. Uji normalitas dilakukan menggunakan uji Kolmogorov-Smirnov. Karena data tidak berdistribusi normal, perbandingan kadar enzim antara kelompok keparahan dianalisis menggunakan total sampling. Analisis korelasi antara parameter enzim hati dan tingkat keparahan dilakukan dengan uji Spearman. Nilai $p < 0,05$ dianggap bermakna secara statistik. **Hasil:** Hasil penelitian menunjukkan bahwa median kadar SGOT secara signifikan lebih tinggi pada pasien dengan dengue berat dibandingkan dengan dengue tanpa tanda bahaya ($p < 0,05$). Rasio SGOT/SGPT juga ditemukan lebih tinggi secara bermakna pada kelompok dengue berat

($p < 0,05$). Analisis korelasi Spearman menunjukkan adanya korelasi positif antara kadar SGOT dan tingkat keparahan dengue, serta antara rasio SGOT/SGPT dan tingkat keparahan penyakit. Meskipun kadar SGPT meningkat pada kasus dengue berat, kekuatan korelasinya lebih lemah dibandingkan SGOT. **Kesimpulan:** Peningkatan kadar SGOT dan rasio SGOT/SGPT berhubungan secara signifikan dengan tingkat keparahan pasien dengue di RSUD Labuang Baji Makassar. Parameter ini berpotensi menjadi biomarker pendukung dalam identifikasi dini dengue berat serta membantu klinisi dalam stratifikasi risiko dan pemantauan kondisi pasien.

Kata Kunci: dengue, SGOT, SGPT, rasio SGOT/SGPT, enzim hati, tingkat keparahan, cross-sectional



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“THE RELATIONSHIP BETWEEN SGOT, SGPT, AND THE SGOT/SGPT RATIO WITH THE SEVERITY LEVEL OF DENGUE PATIENTS AT LABUANG BAJI GENERAL HOSPITAL MAKASSAR 2024”

ABSTRACT

Background: Dengue infection remains a significant public health concern in Indonesia, with a broad clinical spectrum ranging from mild febrile illness to severe dengue characterized by plasma leakage, hemorrhage, organ impairment, and shock. Hepatic involvement is frequently observed in dengue patients and is manifested by elevated serum transaminases, namely Serum Glutamic Oxaloacetic Transaminase (SGOT) and Serum Glutamic Pyruvic Transaminase (SGPT). The SGOT/SGPT ratio has been proposed as a potential indicator of hepatic injury severity. However, data regarding their association with dengue severity at the hospital level remain limited.

Objective: This study aimed to analyze the relationship between SGOT levels, SGPT levels, and the SGOT/SGPT ratio with the severity level of dengue patients at Labuang Baji General Hospital Makassar in 2024. **Methods:** This analytic observational study used a cross-sectional design. Data were collected from medical records of confirmed dengue patients treated in 2024 using consecutive sampling. SGOT and SGPT values were obtained from laboratory examination results at admission, and the SGOT/SGPT ratio was calculated accordingly. Dengue severity was classified based on WHO criteria into non-severe dengue and severe dengue. Normality testing was performed using the Kolmogorov–Smirnov test. Since the data were not normally distributed, the total sampling test was used to compare enzyme levels between severity groups. The correlation between liver enzyme parameters and dengue severity was analyzed using Spearman’s rank correlation test. A p -value < 0.05 was considered statistically significant. **Results:** The study found that median SGOT levels were significantly higher in patients with severe dengue compared to non-severe dengue ($p < 0.05$). Similarly, the SGOT/SGPT ratio was significantly elevated in the severe group ($p < 0.05$). Spearman correlation analysis demonstrated a positive correlation between SGOT levels and dengue severity,

as well as between the SGOT/SGPT ratio and disease severity. However, although SGPT levels were elevated in severe cases, the strength of correlation was weaker compared to SGOT.

Conclusion: *Elevated SGOT levels and increased SGOT/SGPT ratio are significantly associated with the severity level of dengue patients at Labuang Baji General Hospital Makassar. These findings indicate that SGOT and the SGOT/SGPT ratio may serve as useful supportive biomarkers for early identification of severe dengue and may assist clinicians in risk stratification and clinical monitoring.*

Keywords: *dengue infection, SGOT, SGPT, SGOT/SGPT ratio, liver involvement, disease severity, cross-sectional study*

