

INTISARI

Latar Belakang: Infeksi virus hepatitis B merupakan masalah kesehatan masyarakat global yang menyebabkan morbiditas dan mortalitas. Hepatitis B dapat berkembang menjadi infeksi kronis dan menyebabkan komplikasi seperti fibrosis hati, sirosis hepatis, dan karsinoma hepatoseluler (KHS). Diperlukan penilaian fibrosis hati yang efektif untuk mencegah perkembangan infeksi hepatitis B kronis menjadi lebih lanjut. Pemeriksaan fibrosis hati dapat dilakukan pengukuran kekakuan hati dengan metode pencitraan seperti USG elastografi dan pemeriksaan laboratorium. *Aspartate Aminotransferase to Platelet Ratio Index* (APRI) dan *Modified-Aspartate Aminotransferase to Platelet Ratio Index* (M-APRI) merupakan salah satu alternatif pemeriksaan sederhana yang berdasarkan perhitungan dari beberapa parameter laboratorium. Penggunaan M-APRI untuk menilai kekakuan hati pada pasien hepatitis B kronis masih belum pernah diteliti sebelumnya.

Tujuan: Penelitian ini bertujuan untuk menilai korelasi antara APRI, M-APRI dengan kekakuan hati pada pasien hepatitis B kronis.

Metode: Penelitian ini merupakan studi observasional dengan desain potong lintang. Populasi penelitian adalah pasien terdiagnosis hepatitis B kronis di RSUP Dr. Sardjito yang bersedia dilakukan pemeriksaan laboratorium dan pemeriksaan USG elastografi untuk menilai kekakuan hati. Parameter laboratorium yang diperiksa adalah; pemeriksaan darah lengkap, albumin, AST/ALT, *gamma glutamyl transferase* (GGT). Data deskriptif disajikan dengan rerata \pm simpang baku dan median (min – max). Uji normalitas data menggunakan uji Saphiro Wilk. Uji korelasi menggunakan analisis Spearman. Ditetapkan tingkat kemaknaan statistik dengan nilai $p < 0,05$. Analisis data ini menggunakan bantuan perangkat lunak SPSS versi 25.

Hasil: Subjek penelitian ini berjumlah 88, sebanyak 49 subjek dikeluarkan karena masuk kriteria eksklusi. Didapatkan sebanyak 39 subjek yang dianalisis dengan mayoritas subjek adalah laki-laki $n=22$ (56,4%). Median usia subjek adalah 39 tahun. Median nilai APRI adalah 0,36 (0,16-2,02) sedangkan M-APRI adalah 3,22 (0,73-31,30). Rerata hasil pengukuran kekakuan hati yaitu $7,11 \pm 1,60$ kPa, mayoritas subjek termasuk pada klasifikasi fibrosis derajat F2 berdasarkan kriteria METAVIR ($n=18$; 46,2%). Ditemukan korelasi positif yang bermakna antara nilai APRI terhadap kekakuan hati ($r=0,394$; $p=0,013$). Hasil korelasi positif yang bermakna juga ditemukan antara nilai M-APRI terhadap kekakuan hati pada pasien hepatitis B kronis ($r=0,470$; $p=0,003$).

Kesimpulan: Terdapat korelasi positif yang bermakna antara APRI, M-APRI dengan kekakuan hati pada pasien hepatitis B kronis. Korelasi M-APRI dengan kekakuan hati pada pasien hepatitis B kronis lebih baik dibandingkan dengan APRI.

Kata Kunci: hepatitis B kronis, kekakuan hati, APRI, M-APRI

ABSTRACT

Background: Hepatitis B virus infection is a global public health problem that causes morbidity and mortality. Hepatitis B can develop into a chronic infection and cause complications such as liver fibrosis, liver cirrhosis, and hepatocellular carcinoma (KHS). Effective assessment of liver fibrosis is needed to prevent further progression of chronic hepatitis B infection. Liver fibrosis examination can be done by measuring liver stiffness using imaging methods such as ultrasound elastography and laboratory examination. Aspartate Aminotransferase to Platelet Ratio Index (APRI) and Modified-Aspartate Aminotransferase to Platelet Ratio Index (M-APRI) are simple alternative examination based on calculation of several laboratory parameters. The use of M-APRI to assess liver stiffness in chronic hepatitis B patients has not been studied before.

Objective: This study aimed to assess the correlation between APRI, M-APRI and liver stiffness in chronic hepatitis B patients.

Methods: This study was an observational study with a cross-sectional design. The study population was patients diagnosed with chronic hepatitis B at Dr. Sardjito Hospital who were willing to undergo laboratory examination and abdominal ultrasound elastography to assess the liver stiffness. Laboratory parameters examined were: complete blood test, albumin, AST/ALT, gamma glutamyl transferase (GGT). Descriptive data were presented as mean \pm standard deviation and median (min - max). Normality data performed with Saphiro Wilk test. Correlation analysis performed with Spearman test with *p value* <0.05 considered statistically significant. Analysis of this data used SPSS version 25 software.

Results: There were 88 subjects in this study, 49 subjects were excluded because they met the exclusion criteria. There were 39 subjects analyzed in this study, with the majority of subjects were male $n=22$ (56.4%). The median age of the subjects was 39 years. The median APRI value was 0.36 (0.16-2.02), while M-APRI value was 3.22 (0.73-31.30). The mean of liver stiffness measurement was 7.11 ± 1.60 kPa, the majority of subjects were classified as fibrosis grade F2 according to METAVIR criteria ($n=18$; 46.2%). There was a significant positive correlation between APRI and liver stiffness ($r=0.394$; $p=0.013$). A significant positive correlation was also found between M-APRI and liver stiffness in chronic hepatitis B patients ($r=0.470$; $p=0.003$).

Conclusion: There was a significant positive correlation between APRI, M-APRI with the liver stiffness in chronic hepatitis B patients. The correlation between M-APRI and liver stiffness in chronic hepatitis B patients is better than APRI.

Keywords: chronic hepatitis B, liver stiffness, APRI, M-APRI