

INTISARI

Latar belakang: Sirosis hati ditandai dengan pembentukan nodul regeneratif di parenkim hati yang dikelilingi oleh septa fibrosa karena cedera hati kronis. Komplikasi sirosis hati dekompensata terjadi pada banyak organ termasuk jantung dan melibatkan kelainan elektrofisiologis pada QT interval. Pasien sirosis hati lanjut terjadi inflamasi sistemik dan dapat dievaluasi dengan rasio limfosit-monosit (RLM), yang juga dapat melihat progresivitas sirosis hati secara cepat. Tujuan penelitian ini untuk mengetahui korelasi rasio limfosit-monosit (RLM) dengan *QT interval* pada pasien sirosis hati.

Metode: Penelitian studi observasional analitik dengan desain potong lintang. Penelitian ini melibatkan populasi sirosis hati yang dirawat di bangsal penyakit dalam RSUP Dr. Sardjito. Dilakukan pemeriksaan laboratorium darah rutin limfosit absolut dan monosit absolut kemudian di hitung rasio limfosit-monosit (RLM). Pemeriksaan EKG untuk mengidentifikasi QT interval dan *prolonged QT interval*. Analisis data dasar secara deskriptif, ditunjukkan dengan rerata dan standar deviasi. Korelasi RLM dengan QT Interval dan *prolonged QT interval* pada pasien sirosis hati menggunakan uji korelasi *Pearson*.

Hasil: Subjek penelitian ini sebanyak 34 pasien sirosis hati dengan rerata umur 49 ± 11 tahun. Pasien laki-laki sebanyak 22 pasien (64,7%) dan perempuan sebanyak 12 pasien (35,3%). Hasil penelitian ini didapatkan hubungan negatif bermakna antara rasio limfosit-monosit dengan *prolonged QT interval* pada pasien sirosis hati dengan $r = -0,567$ ($p < 0,028$).

Simpulan: Berdasarkan hasil penelitian ini didapatkan korelasi negatif bermakna dengan kekuatan sedang antara rasio limfosit-monosit dengan Qt interval pada penderita sirosis hati yang mengalami nilai *prolonged QT interval*.

Kata kunci: Sirosis Hati, Rasio limfosit-monosit, EKG, *QT interval*

ABSTRACT

Background: Liver cirrhosis is characterized by the formation of regenerative nodules in the liver parenchyma surrounded by fibrous septa due to chronic liver injury. Complications of decompensated liver cirrhosis occur in many organs including heart and involve electrophysiological abnormalities at QT intervals. Patients with advanced liver cirrhosis show systemic inflammation and can be evaluated with the lymphocyte-to-monocyte ratio (LMR), which can also see the progression of liver cirrhosis quickly. The purpose of this study was to determine the correlation between lymphocyte-to-monocyte ratio (LMR) and QT interval in patients with liver cirrhosis.

Method: This study is an analytic observational study with a cross-sectional design involving a population of patients with liver cirrhosis treated in Dr. Sardjito general hospital. Routine blood laboratory examinations of absolute lymphocytes and absolute monocytes were then calculated on the lymphocyte-to-monocyte ratio (LMR). ECG examination was used to identify QT intervals and prolonged QT intervals. The analysis of basic data descriptively was indicated by mean and standard deviation. The correlation between LMR and QT Interval and prolonged QT interval in patients with liver cirrhosis was determined by the Pearson's correlation test.

Results: The subjects of this study were 34 patients with liver cirrhosis with a mean age of 49 ± 11 years. There were 22 male patients (64.7%) and 12 female patients (35.3%). The results of this study found a significant negative correlation between lymphocyte-to-monocyte ratio (LMR) and prolonged QT interval in patients with liver cirrhosis with $r = -0.567$ ($p < 0.028$).

Conclusion: This study found a significant negative correlation with moderate strength between lymphocyte-to-monocyte ratio (LMR) and QT interval in patients with liver cirrhosis who experienced prolonged QT interval values.

Keywords: Liver cirrhosis, lymphocyte-to-monocyte ratio, ECG, QT interval