ABSTRAK

Hubungan antara *Viral Load* RNA VHC dan HOMA-IR pada Pasien Hepatitis C Kronis

Nadhya Allia

Latar Belakang: Infeksi virus hepatitis C (VHC) merupakan penyebab penting penyakit hati di dunia. Deteksi RNA VHC dengan PCR merupakan standar baku emas diagnosis infeksi VHC. Resistensi insulin merupakan salah satu komplikasi ekstra hepatik infeksi hepatitis C yang perlu diketahui sejak dini guna mencegah komplikasi yang lebih berat. Protein *core*, NS-3, dan NS-5 adalah komponen protein utama RNA VHC yang terlibat dalam kejadian resistensi insulin. HOMA IR merupakan salah satu cara pengukuran sensitivitas insulin yang efektif dan efisien. Melihat keterlibatan komponen protein RNA VHC dalam kejadian resistensi insulin, dikembangkan suatu hipotesis bahwa jumlah *viral load* RNA VHC berhubungan dengan nilai HOMA IR. Namun, dari beberapa penelitian terdahulu, hubungan antara *viral load* RNA VHC dengan kejadian resistensi insulin masih kontroversial, dan sejauh ini belum banyak penelitian di Indonesia yang melihat hubungan antara keduanya, sehingga penelitian ini perlu dilakukan.

Tujuan: Menentukan hubungan antara *viral load* RNA VHC dengan HOMA IR pada pasien hepatitis C kronis

Metode: Penelitian analitik observasional dengan rancang bangun *cross-sectional*, melibatkan 26 data rekam medis pasien Hepatitis C kronis yang memenuhi kriteria inklusi dan eksklusi. Pada semua data rekam medis pasien, diambil data mengenai jumlah *viral load* RNA VHC dan nilai HOMA IR, kemudian dilakukan analisis data menggunakan uji Spearman. Nilai $p < 0,05$ dianggap signifikan.

Hasil: Didapatkan rerata usia subjek adalah 51,27 ± 7,03 tahun dengan prosentase pria : wanita 42,3% vs 57,7%. Pada subjek penelitian ini, didapatkan jumlah *viral load* RNA VHC 2,93 $x10^6$ IU/mL dan nilai HOMA IR 2,64. Berdasarkan analisis dengan uji korelasi Spearman, didapatkan hubungan antara *viral load* RNA VHC dan HOMA IR dengan kekuatan hubungan kuat yang bermakna secara statistik ($r=0,615$; $p=0,001$).

Kesimpulan: Pada pasien hepatitis C kronis, terdapat hubungan linier positif antara jumlah *viral load* RNA VHC nilai HOMA IR.

Kata Kunci: Hepatitis C kronis, *viral load* RNA VHC, HOMA IR

ABSTRACT

The correlation between HCV RNA viral load and HOMA IR in chronic hepatitis C patients

Nadhya Allia

Background: *Hepatitis C virus (HCV) infection is an important cause of liver disease in the world. Detection of HCV RNA by PCR is the gold standard for the diagnosis of HCV infection. Insulin resistance is one of the extrahepatic complications of HCV infection that needs to be recognized early to prevent more serious complications. Core proteins, NS-3, and NS-5 are the main components of HCV RNA proteins which are involved in the incidence of insulin resistance. HOMA IR is an effective and efficient way to measure insulin resistancy. Seeing the involvement of HCV RNA protein components in the incidence of insulin resistance, a hypothesis was developed that the level of HCV RNA viral load was related to the HOMA IR value. However, from several previous studies, the relationship between HCV RNA viral load and the incidence of insulin resistance is still controversial, and so far not many studies in Indonesia have looked at the relationship between the two, so this research needs to be done.*

Objective: *To determine the relationship between HCV RNA viral load and HOMA IR in chronic hepatitis C patients*

Methods: An observational analytic study with a cross-sectional design, involving 30 medical records of chronic hepatitis C patients that met the inclusion and exclusion criteria. Data of HCV RNA viral loads and HOMA IR counting from all of medical records were analyzed data using the Spearman test. A p-value <0.05 was considered significant.

Result: *The average age of subjects was 51,27 ± 7,03 years old with the percentage of men: women 42.3% vs 57.7%. In the subject of this study, HCV RNA viral load level was 2,93 x10^6 IU/mL and HOMA IR was 2,64. Based on the analysis with Spearman correlation test, it was found that the correlation between HCV RNA viral load and HOMA IR was strong and statistically significant (r=0,615; p=0,001).*

Conclusions: *In chronic hepatitis C patients, there is a positive linier relationship between HCV RNA viral load and HOMA IR.*

Keywords: *Chronic hepatitis C, HCV RNA viral load, HOMA-IR*