Hubungan SNP IL-28B Pejamu dengan Respons Virologis Menetap serta Kaitannya dengan Ekspresi Interferon-3 dan Reseptor Interferon-λ3 di Jaringan Hati pada Pasien Hepatitis C Kronik dengan Pengobatan Pegylated Interferon Α2 dan Ribavirin = Association between SNP IL-28B and Sustained Virological Response and Its Relation with Expression of Interferon Lambda-3 and Interferon Lambda-3 Receptor in Liver Tissues of Chronic Hepatitis C Patients Treated with Pegylated Interferon α2 and Ribavirin

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Abstrak

[ABSTRAK
Latar Belakang. SNP IL-28B mempunyai peran penting dalam pencapaian SVR pada pengobatan Hepatitis C kronik antarras manusia dan berpotensi untuk memprediksi keberhasilan terapi Peg-IFN/RBV maupun penyembuhan spontan Hepatitis C akut. Hingga saat ini, mekanisme molekular yang mendasari kaitan SNP IL-28B dengan respons terapi masih belum jelas meskipun diperkirakan terkait dengan ekspresi IFN-l3 dan reseptor IFN-l3 di jaringan hati.

Tujuan. Mengetahui hubungan SNP IL-28B dan SVR serta ekspresi IFN-l3 dan reseptor IFN-l3 di jaringan hati serta mendapatkan kemaknaan klinis SNP IL-28B dan kovariat SVR dalam memprediksi respons terapi Peg-IFN/RBV.

Metode. Penelitian ini terbagi menjadi dua bagian. Pertama, penelitian potong lintang pada pasien Hepatitis C kronik yang telah selesai menjalani terapi Peg-IFN/RBV dengan melakukan pengambilan data dasar dan sampel darah. Kedua, penelitian kasus kontrol pasien yang menjalani biopsi hati dan pewarnaan imunohistokimia.

Hasil. Pencapaian SVR yang lebih tinggi ditemukan pada pasien dengan alel CC SNP IL28B (p=0,014). Alel CC SNP IL28B mempunyai ekspresi IFN-l3 lebih tinggi dibandingkan dengan alel non-CC (p = 0,018). Meskipun demikian, tidak ditemukan adanya perbedaan bermakna antara ekspresi IFN-l3 (p = 0,237) maupun reseptor IFN-l3 dengan SVR (p = 0,237). Pada penelitian ini, diformulasikan persamaan faktor risiko pencapaian SVR sebagai p = 1 / (1 + e-y); e = 2,7, y = -2,498 + 2,652 (SNP IL-28B) + 2,029 (trombosit) untuk praterapi dan sedangkan untuk masa terapi y = -0,223 + 2,621 (RVR).

Simpulan. SNP IL-28B merupakan faktor risiko praterapi yang penting dalam pengobatan hep C kronik G1 menggunakan terapi dua kombinasi. Alel mayor IL28B mengekspresikan IFN-l3 dan reseptornya lebih banyak sebagai respons adanya VHC, namun tidak ditemukan adanya hubungan hal tersebut dengan pencapaian SVR. RVR merupakan faktor masa terapi terbaik untuk memprediksi SVR. Penelitian lanjutan diperlukan untuk membuktikan adanya faktor lain yang berperan dalam pencapaian SVR.;
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ABSTRACT
Background: SNP IL-28B played an important role in achieving sustained virological response (SVR) among different ethnics in chronic Hepatitis C patients and is considered potential in predicting treatment response of Pegylated interferon/ribavirin (Peg-IFN/RBV) combination and spontaneous clearance in acute hepatitis. Up to date, molecular mechanism underlying correlation between SNP IL28B and SVR has not been fully understood yet although it is predicted to be related to IFN-λ3 and IFN-λ3 receptor in liver tissues.

Aim: Understanding the association between SNP IL-28B and SVR in chronic Hepatitis C treatment and expression of IFN-l3 and IFN-l3 receptor in liver tissues to evaluate clinical importance of SNP IL-28B examination in Hepatitis C treatment of Peg-IFN/RBV through SVR prediction model.

Methods: This study consisted of two parts. First, a cross-sectional study on chronic Hepatitis C patients who completed Peg-IFN/RBV therapy. The second part was case control study on patients underwent liver biopsy and immunohistochemical staining.

Results: Sustained virological response was significantly higher in CC allele of SNP IL-28B compared to non CC allele (p = 0.015). Higher expression of IFN-l3 was found in CC allele compared to non CC allele (p = 0.018). On the other hand, there is no significant difference between SVR and expression of IFN-l3 (p = 0.237) and IFN-l3 receptor (p = 0.237). Risk factor for SVR probability were formulated into p = 1 / (1 + e-y); e = 2.7, y = -2.498 + 2.652 (SNP IL-28B) + 2.029 (thrombocytes) for pretreatment while for on treatment risk factor y = -0.223 + 2.621 (RVR)

Conclusion: SNP IL-28B was important pretreatment risk factor in genotype 1 chronic Hepatitis C treated with dual therapy. Major allele of IL-28B expressed more IFN-l3 and its receptor in response to HCV although no association between both factors was found. RVR was the best on treatment factor for SVR. Further evaluation study was required to find other possible factors affecting SVR achievement
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