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Impact of FokI (rs10735810) and BsmI (rs1544410) on treatment of chronic HCV patients with genotype 4

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Abstract

Background and Aim: Chronic infection with hepatitis C virus (HCV) is a huge problem both globally and at the level of the individual patient. Our aim is to detect the Influence of Vitamin D Receptor Gene Polymorphisms (BsmI & Fok1) and Vit.D level in HCV patients under treatment with interferon.

Subject and Methods: Blood samples were taken from 103 HCV patients. They were divided into responders (n=63) and non-responders (n=40) according to their response to interferon treatment. Also 120 subjects with matched age and sex were enrolled as controls. All subjects were subjected to: history taking, general examination, liver function tests, hepatitis markers, HCV quantitation by real time PCR, DNA extraction from whole blood, PCR-RFLP for genotyping and quantitation of Vit.D level by ELISA.

Results: There was significant differences between responders and non responders in the mean values of Vit D (P = 0.001) as well as the prevalence of SNP BsmI (Bb) (p=0.02). Meanwhile, no significant differences in Fok1 genotype between responders and non responders to interferon therapy of HCV patients in all genotypes [FF, Ff, ff) (p=0.34, 0.091 and 0.43) respectively.

Conclusion: BsmI and Vit.D level in chronic liver disease patients are predictors of response to combination therapy of HCV.

Key words: hepatitis C; Vitamin D; polymorphism.