中文題目:類固醇賀爾蒙在C型肝炎病毒基因第一型感染之角色

英文題目: The role of steroid hormone on Hepatitis C virus genotype 1 infection

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Background: Hepatitis C virus, an important risk of liver cirrhosis and hepatocellular carcinoma, is the major healthcare problem worldwide. The standard antiviral treatment by interferon and ribavirin has been the standard of care and the response has been reported different in males and females patients.

AIMs: The present study aims to identify the role of steroid hormone in HCV antiviral therapy.

Methods: HCV NS 3 and NS 5A were determined in HCV genotype 1 replication cell lines, and also in infected cells by androgen and estrogen combined with antiviral treatment in steroid-starved culture conditions. A cohort of HCV genotype 1- infected male and female patients were enrolled.

Results: When combined with steroid hormone in antiviral treatment, the HCV NS 3 and NS 5A protein expression levels were showed in inversed phenomena. Androgen enhanced the viral protein expression level in Ava 5 and Con 1 cells, also in infected HCV genotype 2a cells. The opposite affects were shown by estrogen in steroid-reduced conditions. The similar results were observed in the cohort study.

Conclusions: Our results showed that steroid hormone may affect the HCV viral protein expression that might explain the role of gender in HCV infection. A better understanding the affecting action of steroid hormone in antiviral treatment could be beneficial in developing the novel therapeutic regimen.

Key words: steroid hormone, HCV genotype 1, Peginterferon, Ribavirin