Introduction

Chronic hepatitis C virus infects approximately 170 million people worldwide, is a major cause of chronic hepatitis, liver cirrohsis and hepatocellar carcinoma and represents the most frequent cause for liver transplantation in the US and Europe ***(Lauer and Walker, 2001)***.

The morbidity and mortality related to chronic hepatitis C is a major public health issue in Egypt, where HCV prevalence nationwide is estimated to be around 15%. Interestingly, genotype 4 represents over 90% of the cases in Egypt ***(Ray et al., 2000)***.

The current optimal therapy for patients with chronic hepatitis C virus (HCV) infection is the combination of peginterferon and ribavirin ***(Manns et al., 2001)***.

The aim of treatment in chronic hepatitis C is to achieve a sustained virologic response (SVR) defined as undetectable HCV RNA with a sensitive PCR assay (<50 IU/ml) 24 weeks after the end of antiviral therapy. ***(Lindsay et al., 2008).*** Pegylated IFN and ribavirin combination therapy was associated with significant improvements in SVR rates. however, the percentage of genotype 4 infected patients achieving a SVR is only around 50%, and it is not possible to predict those patients who will benefit from therapy ***(Desmond et al., 2006)***.

A number of host and viral factors have been identified that influence treatment outcomes. Identifying these factors may allow individualized modifications of treatment regimens, which subsequently could improve treatment response. As well, treatment with pegylated interferon and ribavirin is associated with many side effects and early detection of non virologic responders is of major importance to avoid

unnecessary treatment-related morbidity in these patients and to enhance the cost-effectiveness of treatment programmes ***(Kau et al., 2008).***

Little is known about the predictors of the efficacy of treatment on HCV genotype 4-infected patients due to the small number of patients with genotype 4 included in most of large treatment trials ***(Tanaka et al., 2004)*** . A study conducted in Middle Eastern patients showed that patients with high viraemia and severe fibrosis were less likely to respond than the other patients ***(Hasan et al.,2004)***.

In France, factors associated with a lower response among genotype 4 hepatitis C patients were severe fibrosis and non-Egyptian origin ***(Roulot et al., 2007)***.

In Egypt, low baseline histological stage and grade was associated with a better response ***(Kamal et al., 2007).***