SUMMARY AND CONCLUSION

Hepatitis C virus infection is a major cause of chronic liver disease worldwide; approximately 170 million people are infected. Chronic infection occurs in 50-80% of cases and eventually leads to cirrhosis and hepatocellular carcinoma**.** Egypt has possibly the highest hepatitis C virus prevalence worldwide.

Therapies for the management of chronic hepatitis C (CHC) have developed from monotherapy to pegylated interferon α (PEG-IFN α) and ribavirin combination therapy, which is now regarded as the standard of therapy. However, responses are not uniform across all patients and it is not possible to predict those patients who will benefit from therapy.

The molecular mechanisms underlying lack of therapeutic response remain unknown. Considering the length of antiviral therapy, as well as its side effects and costs, accurate prediction of treatment response prior to initiation of treatment is critical. A number of host and viral related factors have been identified that influence treatment outcomes and independently predict response to treatment.

The objective of the present study was to retrospectively evaluate the effect of liver fibrosis on early virological response to combined therapy with peg-interferon and ribavirin in chronic HCV patients of genotype 4 and the Predictors of response to the proposed treatment.

This study has been conducted on 500 patients suffering from chronic hepatitis C who were previously diagnosed and treated in hepatology research unit at Tanta fever hospital. These patients received antiviral treatment in the form of pegylated interferon alfa-2a (180mcg/week) and pegylated interferon alpha 2b (1.5 mcg / kg BW once weekly) with oral ribavirin (800-1200 mg/d) based on the body weight (<75 kg or >75 kg respectively).

All patients were subjected to routine laboratory investigations as a preparation of IFN therapy (which included CBC, complete liver biochemical profile, Quantitative HCV RNA by PCR), and liver biopsy for histopathology assessment according to METAVIR score. The end point of the study is early virological response defined as a drop of $\geq$ 2 log in serum HCV viral load at 12 weeks after start of therapy.

The early virological response to treatment was correlated with gender, AST, ALT, the degree of liver fibrosis and the activity in biopsy.

The results of this study showed that:

- Early virological response (EVR) (at week 12) were present in 432 patients, 99%of them showed complete response and 1% partial response.
- There was insignificant statistical difference between both genders as regard early virological response (after 12 weeks of treatment).

- There was insignificant statistical difference between AST or ALT levels as regard the early virological response (at 12week of treatment).
- Patients who had lower fibrosis scores (F1 and F2) achieved EVR significantly higher than F3. Those with F4 showed highly significant lower response than F1 and F2 according to METAVIR scoring system.
- There was statistical insignificant difference between degrees of activity by METAVIR score of the biopsy as regard early virological response (at week 12 of treatment).

From the results of our study we can conclude that:

- There is a strong correlation between fibrosis stage and response to combined therapy and fibrosis stage could be considered as predictor of response to therapy.
- As the degree of liver fibrosis decreases the response to treatment increases and vise versa so in F1, F2 and F3 there is a good response and in F4 the response is not.
- Thus liver fibrosis can be used as a predictor to treatment with peginterferon and ribavirin in HCV patients.