Baseline prediction of pegylated interferon and ribavirin therapy outcome in patients With chronic hepatitis C virus infection

Thesis

Submitted For Partial Fulfillment of Master Degree In Hepatolology, Gastroenterology and Infectious Diseases.

By

Mostafa Mokhtar El-Shenawy

(M.B.B.Ch)

Supervisors

Prof. Ashraf Khamis Nassar

Professor and head Of Hepatology, Gastroenterology and Infectious Diseases
Benha Faculty of Medicine, Benha University

Prof. Mohammed Abd El-Razek Sharaf El-Dein

Professor Of Tropical Medicine
Tanta Faculty of Medicine, Tanta University

Dr. Entesar Husain El-Sharqawy

Ass. Prof. of Hpatology, Gastroenterology and Infectious Diseases
Benha Faculty of Medicine , Benha University

Dr. Naglaa El-Toukhy Ramadan El-Toukhy

Lecturer of Hepatology, Gastroenterology and Infectious Diseases
Benha Faculty of Medicine, Benha University

Benha University

2012

Introduction

Hepatitis C virus (HCV), with an estimated 170 million infected worldwide, is the major causative agent of chronic liver disease, cirrhosis and hepatoocellular Carcinoma **(WHO., 2010)**.

Current treatment of chronic hepatitis C virus (HCV) infection has limited efficacy and is costly, and involves severe side effects. Thus, predicting non-response is of Major interest for both patient well being and health care expense. At present, treatment cannot be individualized on the basis of the baseline predictor of Response **(Saludes et al., 2010)**.

As combination treatment failure occur in about half of all patients with chronic hepatitis C infection. **(Fried et al., 2002)**. Prediction of treatment outcome at baseline would be highly beneficial . So, the use of discriminant statistical models based on host and viral characteristics to provide an aggregate prediction of the treatment outcome at baseline **(saludes et al., 2010)**.

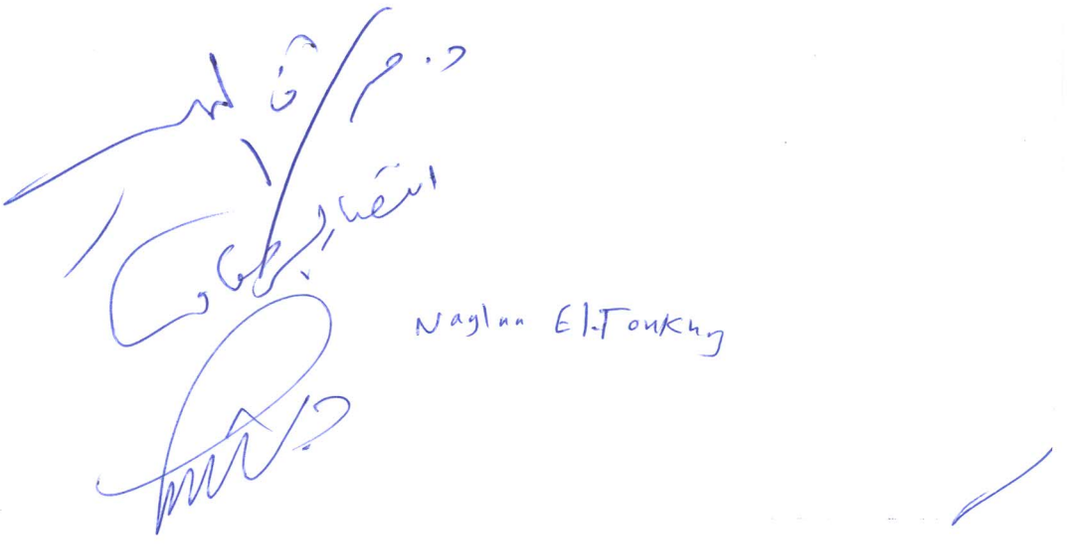
Amr Nassar

Naglaa El-Tawksy

Entesar

Aim of the work

A retrospective and prospective study to identify pre-treatment clinical and virological parameters treatment failure as well as to assess whether therapy outcome could predicted at baseline .



Patient and Methods

A retrospective and prospective study five hundred patients with chronic hepatitis C virus infection will be enrolled in this study and divided in to two groups according to the response to pegylated interferon and weight – based ribavirin therapy (responders , non-responders).

- **Site of the study:**

The study will be carried out in Kafr El-Sheikh liver and cardiac center.

- **Inclusion criteria:**

- Age from 18 to 60 years.
- Positive anti – HCV and HCV RNA.
- Evidence of chronic hepatitis on liver biopsy performed within the previous 12 months.
- Compensated liver cirrhosis (child A).
- HBsAg negative.
- White blood cell (WBC) >3,500/ UL.
- Neutrophil count > 2,000/ UL.
- Platelets > 75,000/ UL.
- Hb > 13 gm / dl in males and 12 gm / dl in females.
- Albumin > 3.5 gm.
- Serum Creatinine > 1.2 gm / dl.
- Patients who had not been treated previously with interferon or ribavirin.
- Baseline levels of thyrotropin (TSH) within the reference range.
- Consent of the patient.

- **Exclusion criteria:**

- 1 Age < 18 and > 60 years.
- Co – infection with HBV.
- Decompensated liver cirrhosis.
- Autoimmune liver cirrhosis.
- Alcoholic liver disease and other substance abuse.
- Pr-existing anemia (Hb < 13 gm /dl in males and 12 gm /dl) in females.

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- Chronic renal disease.
- Ischemic cardiovascular disease.
- Patients with organ transplant.
- Antiviral, or immunosuppressive therapy within the last 6 months.
- Sever pre - existing psychiatric conditions.
- Known history of hemolytic anemia.
- Pregnancy or breast feeding.
- Patients had a known thyroid disease or if the patient has an abnormal baseline TSH level.

All patients will be subjected to the following :

1-Clinical assessment including history taking and clinical examination stressing in history of schistosomiasis treatment.

2-Laboratory investigation :

- Completed blood picture.
- Blood sugar.
- Liver function tests including (Bilirubin, Albumin, Prothrombin time and INR).
- Markers of liver injury (Alanine transaminase (ALT), Aspartate transaminase (AST), and Alkaline phosphatase (ALP)).
- Viral markers: hepatitis B surface antigen (HBs Ag), hepatitis C antibody (HCV Ab) by ELISA.
- HCV polymerase chain reaction (PCR) before treatment,48 weeks after treatment and six months after treatment by pegylated interferon plus ribavirin for both study (retrospective and prospective study)
- Serum creatinine level.

3-Abdonimal ultrasonography.

4-Liver biopsy to detect stage of fibrosis, necroinflammatory activity.

5-Through out the study, patients will monitored for vital signs, weight, adverse events, medication compliance, thyroid function, hematologic parameters, blood chemistry and HCV –RNA levels.

Reference

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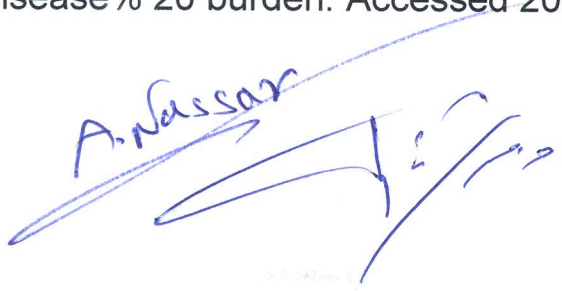

E. Nasser
Naglaa El-Toukhy