

بسم الله الرحمن الرحيم

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تم رقع هذه الرسالة بواسطة / سلوي محمود عقل

بقسم التوثيق الإلكتروني بمركز الشبكات وتكثولوجيا المطومات دون أدنى مسنولية عن محتوى هذه الرسالة.

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بمكات وتكنولوجبارته





Effect of Host Factors on Hepatitis C Treatment by Sofosbuvir Drug

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This thesis has not been submitted for a degree at this or any other university

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Dedication

To my father, my mother, my husband, my brother, my sisters

&

My special friends

For their love, encouragement, help and prayers that made studies possible and to them I owe everything.

Acknowledgement

At first and foremost thanks to "Allah" the most merciful who gave me the power to finish this work.

No words could express my sincere appreciation and deepest thanks to *Prof. Dr. Nadia Sadek Morcos*, Professor of Biochemistry, Faculty of Science, Ain Shams University, for her endless help, motherly attitude, creative thinking, valuable suggestions and constant advice throughout this work. Without her support, the performance of this work would be difficult.

I would like to thank *Prof. Dr. Wahid Halim Doss*, Professor of Tropical Medicine and Hepatology, Faculty of Medicine, Cairo University, for his keen interest on me. His prompt inspirations have enabled me to complete my thesis.

Also, my deep thanks to *Prof. Dr. Mohamed A. M. Makhlouf*, Professor of Internal Medicine, Faculty of Medicine, Ain Shams University, for his cooperation and kind help in completing my thesis.

I am deeply indebted to *Dr. Kamal El Atrebi*, Consultant of Internal Medicine, National Hepatology and Tropical Medicine Research Institute, for his guidance during samples

collection and revision of every detail of the manuscript. It was a pleasure working with him.

I am so grateful to *Dr. Eman M. Saleh*, Assistant professor of Biochemistry, Biochemistry Department, Faculty of Science, Ain Shams University for her spiritual and practical guidance, her enthusiastic encouragement and revision of every detail, as well as profound reading of the manuscript.

My deep thanks and regards to the staff members of the Biochemistry Department, Faculty of Science, Ain Shams University and National Hepatology and Tropical Medicine Research Institute for their support and help.

Last but not least, I would like to thank all my colleagues for their sincere help and encouragement during the course of this study.

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Effect of Host Factors on Hepatitis C Treatment by Sofosbuvir Drug

Abstract

Background: Hepatitis C virus (HCV) infection affects almost 180 million people around the world. HCV infection is one of the worldwide chief causes of chronic liver illness ranging from least histological changes to broad fibrosis and cirrhosis with the possibility of hepatocellular carcinoma (HCC). Egypt is considered to have the highest prevalence worldwide with an expected 14.7% of the total population seropositive for HCV. Even though the development of direct-acting antivirals (DAAs) has significantly improved the treatment responses to HCV infection. Treatment with pegylated-interferon-α (PEG-IFN-α) in combination with ribavirin (RBV) is considered the standard of care for chronic HCV infection treatment in countries with limited medical resources.

Aim: This study aimed to assess the clinical effectiveness and predictors of response to SOF-based regimens, either dual therapy, with SOF/RBV for 6 months or triple therapy with SOF/RBV/PEG-IFN- α for 3 months, and to

assess *IL28B* polymorphism SNP (rs12979860) as a predictor of response in Egyptian chronic HCV infected patients.

Subjects: In the period from 2015 to 2016, patients (n=165) who were eligible for treatment were classified according to their eligibility for interferon therapy: Group 1 (n=106) (interferon eligible) were treated with triple therapy for 12 weeks and Group 2 (n=59) (interferon ineligible) were treated with dual therapy for 24 weeks.

Results: As regard treatment response in the current study, the highest SVR rates were achieved with the Triple group (SOF/RBV/PEG-IFN-α), which was reached 93.4% although, the Dual group (SOF/RBV) showed SVR rates of 79.66%. The non-SVR rates recorded with SOF/RBV and SOF/RBV/PEG-IFN-α regimens were 20.34% and 6.6%, respectively. On analyzing the baseline parameters of patients who failed to treatment (Non-SVR), it was clear that those patients had significantly lower TSH; or higher TNF-α and PDGF. Also, it was found that a number of 106 patients (78.5%) had cleared HCV RNA thus achieved RVR after 4 weeks of treatment. The rate of RVR was non-significantly better in the Triple group (82.8%) vs. (70.8%) in the Dual treated group. By analyzing results in this current study, it was found that patients, who achieved RVR, showed a significant