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MicroRNAs and Liver Fibrosis in Hepatitis C Patients

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Abstract

Egypt has the highest prevalence of hepatitis C virus (HCV) in the world. HCV chronic infection leads to progressive liver damage that ends finally with fibrosis. Predictive biomarkers for liver fibrosis progression are a must for treatment strategies development. Circulating microRNA levels have become a rapidly growing area of clinical research. Circulating miR-29 as a potential new hepatic stellate cell (HSC) activation marker and miR-155 as a positive regulator of inflammation were evaluated in the serum of chronic HCV patients, attended to AL-Azhar University Hospitals, relative to normal individuals and correlated these with clinical patient data. Our results reveal that, the level of miR-29b is decreased while miR-155 is increased in correlation to the fibrotic grade and fibrotic index in male and female chronic HCV patients.

In conclusion, down-regulation of miR-29b and up-regulation of miR-155 are associated with the advance in fibrotic grade; making them a potential non-invasive biomarker for assessment of liver fibrosis in chronic HCV.

Keywords: Biomarker, miR-29b, miR-155, fibrotic grade, HCV, Egypt

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Dedication

*To the source of love and happiness in my life. To **my husband** “Mohamed Soliman”, who has been a constant source of support and encouragement throughout this work, I am truly thankful for having you in my life.*

*This work is also dedicated to **my parents** who share me the load and gave me the strength to bear any difficulties and whose good examples have taught me to work hard for the things that I aspire to achieve.*

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