

EVALUATION OF ALTERATION OF SERUM TOTAL BILIRUBIN, GAMMA GLUTAMYL TRANSFERASE (GGT), BLOOD UREA NITROGEN (BUN), SERUM CREATININE AS POTENTIAL MARKERS OF KIDNEY FUNCTION IN HEPATITIS C INFECTED INDIVIDUALS

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ABSTRACT

Objective: The objective of present study is to evaluate the alternation in serum total bilirubin, Gamma glutamyl transferase, blood urea nitrogen, serum creatinine levels in patients suffering from HCV. The approach is to see the effect of Hepatitis C on kidneys.

Design of Study: These tests were performed on 25 individuals with confirm HCV by ELISA. These tests were also performed on 25 normal healthy individuals for the purpose of comparison.

Setting: Institute of Molecular biology and Biotechnology, The University of Lahore, Raiwund, Lahore. Samples were collected from Shaukat Khanum Memorial Cancer Hospital and Research Centre.

Period: July 2012-August 2012.

Material and Methods: Patients suffering from HCV were included in the present study. Diabetic patients, patient suffering from blood cancer, patient suffering from renal failure, patient suffering from Hypertension, patient suffering from cardiac disease, patient suffering from HCV plus any other disorder were excluded from the present study to evaluate the biochemical alteration in serum total bilirubin, Gamma GT, BUN, serum creatinine in patients suffering from HCV.

Statistical Analysis: Statistical analysis was performed using the statistical package for social studies (SPSS) version 16 for windows. For comparison between the patient's vs. healthy controls, Student's *t* test was applied to evaluate differences in proportions. P value <0.05 was considered significant.

Results: The observed mean \pm SD value of serum total bilirubin level, Gamma glutamyl transferase, BUN, serum creatinine in normal healthy individuals was 0.4609 ± 0.17 , 24.6 ± 13.1 , 13.5 ± 3.5 , 0.75 ± 0.18 while that in HCV +ve individuals was 0.54 ± 0.36 , 49.2 ± 41.4 , 13.8 ± 3.05 , 0.89 ± 0.25 . According to Independent T-test overall significant difference ($p < 0.05$) was observed in gamma glutamyltransferase and serum creatinine but serum creatinine were still in normal range in HCV patient as compare to normal individuals, While insignificant difference ($p > 0.05$) was observed in serum total bilirubin and blood urea nitrogen (BUN) in HCV patient as compare to control group.

Conclusions: The outcomes of the present study showed that overall insignificant alteration was observed in all the parameters related to kidney function. It is therefore inferred that Hepatitis C infection has no or very little effect on kidney function.

KEYWORDS: Chronic Liver Disease, Blood Urea Nitrogen, Kidneys