Immuno histochemical detection of hepatitis C in different clinical samples in Al-Najaf Governorate

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Abstract
The transmission of hepatitis C viral infection is a public health problem, especially for dialysis patients, thalassemia patients, and liver patients, due to the high prevalence and high risk of patients. The aim of this study was to detect hepatitis C virus and reduce its spread among patients, especially patients with dialysis, thalassemia and liver patients. In this study, 150 different clinical samples were recruited and examined by immunodetection for HCV Ab antibodies using a rapid assay and ELISA test. The results shown through the rapid examination and from the ELISA test, in the presence of 63 samples from among the clinical samples, were positive for hepatitis C virus type C, in addition to the presence of other types of hepatitis virus, and these samples included males and females and different ages distributed in different residential areas and environments. As a result of contamination occurring during blood transfusion methods, or as a result of insufficient hygiene and sterilization of the tools used during dialysis, in addition to other causes. The spread of viral hepatitis C type and the emergence of positive infection in patients undergoing dialysis and patients with thalassemia and liver disease is widespread in all Iraqi governorates as well as in countries of the world. Therefore, caution and caution and all necessary measures must be taken to limit this spread and combat means of transportation. Infection and pollutants that increase the susceptibility and exacerbation of the virus.
Keywords: Hepatitis C; clinical samples; Al-Najaf Governorate

1. Introduction

The HCV virus has many ways in which it eludes the body's immunity. As a virus similar to HIV, its DNA mutates rapidly, and this combined with a very high rate of reproduction generates a complete array of genetic variations (1), as the HCV virus has six genetic types and more From 120 distinct subtypes so far (2) and these types are common and geographically widespread (3) and the diversity of these patterns leads to African diagnosis and affects the choice of antiviral treatment (4) The spread of HCV virus in Iraq has been previously studied in the form of different groups such as blood donors And health care workers and patients with thalassemia and liver disease (5-6) that the HCV virus is transmitted through blood transfusion or sexual contact, as well as from the mother to the fetus, and that 30-40 of the cases of infection are without distinct methods of transmission. (7-8) Also, the HCV virus is transmitted through injections and the use of tools contaminated with the virus during organ transplantation, dialysis, and tattoos (9-10).
The World Health Organization (WHO) has proposed a global plan to reduce HCV infections by 80% and deaths by 65% and test 90% of the target population by 2030 (11).

2. Methods

Data collection

This is done by making a questionnaire for all patient data (demographic information) using the SPSS version (12).

Quick test

Antibodies to hepatitis C virus type were detected by the rapid test, and the test was carried out according to the method supplied with the test kit by the manufacturer (High Top / China)

Elisa

HCV Ab was identified and detected in patients' serum by enzyme-linked immunosorbent assay and the test was carried out according to the method provided by the manufacturer (Abia/Germany).

The ethics of the study

The task of collecting samples was approved and facilitated by the donors (the main blood bank, the kidney center, the public health laboratory, Al-Sadr Medical City, the National Hospital for Surgery and Diseases of the Digestive System and Hepatology in Al-Najaf Governorate), where patients' samples were collected after obtaining their consent to do so, and a form was filled out A questionnaire to clarify the most important demographic information.

3. Results and discussion

Hepatitis C virus was detected and investigated in different clinical samples, especially patients undergoing dialysis and thalassemia and liver patients, where 63 samples were HCV Ab positive out of 150 different clinical samples, while the rest of the samples were negative and others were of type B virus through rapid detection and Eliza.
All patients who undergo dialysis are at risk of

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infection with hepatitis C virus. Through this study, it became clear that they did not have a prior infection, but it occurred during the stages of dialysis. Blood and the use of contaminated tools during dental procedures, tattoos and surgical tools during operations. Here lies the risk of infection with the virus, as the infection worsens, leading to cirrhosis of liver cells, cancer and liver damage, which leads to the life of the individual.

Through the important basic information to limit the spread of the virus and to evaluate the necessary measures to control infection and its effectiveness in the holy city of Najaf, in this study I showed that it is possible to prevent infection by activating health education and vaccination programs and emphasizing the follow-up of patients, as all patients must receive vaccination as well as organized monitoring programs Vaccination, emphasis on hygiene and all means of prevention to limit the spread of the virus.

The modes of transmission of the virus differ. It may be transmitted through blood transfusion, hemodialysis, and cocaine addicts through the nose or intravenous injections, body piercing, and the use of tattoos, implants, and hemophilia. All of the above are called common factors for the transmission of viral infection. As for the uncommon factors, they are the use of contaminated shaving tools, sexual activity, and erosion of the joints. Boxers, as well as the transmission between patients and health workers. (12-13) Through studies conducted in recent years, it was found that the prevalence of hepatitis C virus infections has doubled.

Table (1) No. and Percentage of positive samples to viral hepatitis C according to the gender

Gender	Total No.	Positive No.	%
Male	86	35	40.69
Female	64	28	43.75
total	150	63	42
Calculated P value	0.708*		
* No significant difference at P<0.05			

Table (2) No. and Percentage of positive samples to viral hepatitis C according to the age interval

Age interval	Total No.	Positive No.	%
10-21	32	18	56.25
22-33	47	16	34.04
34-45	26	6	23.07
46-57	21	12	57.14
58-70	24	11	45.83
total	150	63	42
Calculated P value	0.043*		
* Significant difference at P<0.05			

Table (4) No. and Percentage of positive samples to hepatitis C according to the residency

Residency	Total No.	Positive No.	%
Rural	70	36	51.42
Urban	80	27	33.75
total	150	63	42
Calculated P value	0.029		
*No significant difference at P<0.05			

Table (4) No. and Percentage of positive samples to hepatitis C according to the residency

Dis. State	Total No.	Positive No.	%
Liver cirrhosis	8	8	100
Thalesemia	23	23	100
Kidney dialysis	32	32	100
Blood transfusion	87	0	0
Total	150	63	42
Calculated P value	<0.001*		
*Significant difference at P<0.05			

Table (5) Antibody titer of positive samples to hepatitis C according to the gender

Gender	Mean ±SD
Male	1.650±0.72
Female	1.410±0.74
Calculated P value	0.206
* No significant difference at P<0.05	

Table (6) Antibody titer of positive samples to viral hepatitis C according to the age

Age interval	Mean ±SD
2-17	1.56±0.86
18-33	1.60±0.73
34-49	1.05±0.89
50-65	1.78±0.61
66-80	1.36±0.53
Calculated P value	0.386*
* No Significant difference at P<0.05	

Table (7) Antibody titer of positive samples to viral hepatitis C according to the residency

residency	Mean ±SD
Rural	1.52±0.66
Urban	1.56±0.83
Calculated P value	0.847

Table (5) Antibody titer of positive samples to hepatitis C according to the gender

Dis. State	Mean ±SD
Liver cirrhosis	1.92±0.87
Thalesemia	1.65±0.84
Kidney dialysis	1.37±0.9
Calculated P value	0.131*
* No significant difference at P<0.05	

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