

Evaluation of Seroprevalence of Viral Hepatitis C among Dentists in College of Dentistry\Baghdad University

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Abstract

Background: Dentists have a raised occurrence of hepatitis C virus contamination consequently of contact to patient's blood and fluid of the body is still controversial.

Aims of Study: The principle aim of this study was to conclude the incidence or prevalence of hepatitis C virus infection among dentists in College of Dentistry\ Baghdad University.

Materials and methods: The study included 70 Iraqi dentists who worked at College of Dentistry in Baghdad University. Contributors filled out a planned questionnaire concerning demographic and work-related features. Venous blood was examined for presence of HCV antibodies by HCV rapid test as recommended in leaflet with kit.

Results: The present study indicate that the prevalence of HCV antibodies among dentists was 0/70 (0.0%), no dentist was HCV seropositive. Dentists routinely used gloves (98.5%), gown (92.8%), and mask (85.7%).

Conclusion: the prevalence of HCV infection among dentists in Iraq is low, and it seems that dentists who usually adhere to basic infection control measures are not at an increased risk for HCV.

Key words: *Hepatitis, seroprevalence, dentists*

1. Introduction

One of the main causes of chronic liver disease worldwide is Hepatitis C virus (HCV) infection. The long-standing impact of HCV infection is extremely changeable, alternating from negligible histological variations to extensive cirrhosis and fibrosis with or without hepatocellular carcinoma (HCC). The number of chronically infected persons worldwide is assessed to be around 160 million, but most are ignorant of their infection (Lavanchy, 2011)

In 2011, the World Health Organization WHO calculated 130–170 million people universally to be frequently infected with HCV. Annually, it is estimated that 3–4 million people are recently infected with HCV and over 350,000 people die from HCV-related liver diseases. Hepatitis rates differ generally by region and population (Hepatitis C fact sheet, 2011).

HCV is mainly spread via percutaneous exposure to blood. Further means of diffusion consist of mother to her infant and infected tools communal used for non-injection drug; sexual spread in addition occurs but usually seems to be ineffective but amongst HIV-infected men who have undefended sex with men (Schmidt *et al.*, 2014).

Introduction to infected blood is the main mode of HCV diffusion. HCV-infected individuals should be learned of the precautions desirable to avoid subjecting others to infected blood. This is principally essential for people who use injection drugs, assumed that HCV spread in this people predominantly outcomes from the

allocation of needles and further infected devices. In recent times, increases of acute HCV because of sexual transmission in HIV-infected men who have sex with men have also been described (van de Laar et al., 2009). The transmission of blood-borne viruses in dental offices is a latent danger to patients and dental staff, predominantly to oral and maxillofacial surgeons (Fry, 2005). Chronic HCV infection is asymptomatic in the common of infected patients and is not identified unless specific investigative experiments are achieved. Maximum infected persons are diagnosed at a future date or when abnormal blood or liver function tests are discovered in regular tests for additional causes (Abou *et al.*, 2009). The occurrence of HCV seroconversion afterward accidental needle stick exposure is unreliable, with accounts varying from 0 to 10%. Whether healthcare workers have a higher incidence of HCV infection than the general population through percutaneous occupational revelation is unclear (Thomas *et al.*, 1996). The objective of this study was to evaluate the seroprevalence of HCV among Dentists in College of Dentistry\ Baghdad University.

2. Materials and Methods

The study included 70 Iraqi dentists who worked at College of Dentistry in Baghdad University they were 45 female and 25 male their age range from 27- 57 with mean age of 36 ± 2.9 , who their dental work in contact with blood and saliva. All the participants in this study filled out a structured questionnaire regarding demographic and occupational characteristics. This questionnaire included whether the dentist in this study were routinely used disposable gloves, gown and mask in their dental work.

Three ml of venous blood were drawn from the participants in this study. Blood samples were collected in tubes. Then centrifuge the blood samples for 15 minutes at 3000 rpm, and the separation serum samples kept at - 20 till used. The samples were verified for antibodies against anti-HCV by one step Anti-HCV strips. The assay was adjusted to international standards, following the manufacturer's recommendations.

3. Results

The current study showed that the dentists routinely used gloves (98.5%), gown (92.8%), and mask (85.7%). Examination HCV in blood samples revealed that the prevalence of HCV antibodies among dentists was 0/70 (0.0%), as clearly shown in table (1).

Table-1: Clinical Characteristic of Study Group (Dentists)

		Study group N=70
Anti-HCV	Positive	0.0%
	Negative	100%
Gloves Use	Positive	98.5%
	Negative	1.5%
Gown Use	Positive	92.8%
	Negative	7.2%
Mask Use	Positive	85.7%
	Negative	14.3%

4. Discussion

The results in this study showed that the Iraqi dentists for the study population were free from HCV in their blood and this may belong to the use of the precautions measures in their work. This result agrees with (Weber et al., 2001) who show the low prevalence of HCV in dentists and this might suggest that dentists have a lower risk of HCV infection caused by occupational accidents than expected by the WHO (WHO, 2000) and also agree with (Allain *et al* 2009) who displayed that the risk of contamination with hepatitis C through a blood transfusion is currently very low in the world. The absence of HCV among dentists may be due to their knowledge for this important subject. This is very agree with other studies (Abdal *et al*, 2013 and Kadeh *et al*, 2014) who revealed that dentists were relatively aware of current risk posed by hepatitis in dental practice and knew how to protect themselves and patients from hepatitis spread. This study needs further studies to take a greater number from dentists with and without using preventive measures to compare between them and take other subjects from normal populations to show HCV incidence among them to make a true comparison. In conclusion, this study revealed that the prevalence of HCV infection among dentists in Iraq is low, and it seems that dentists who usually adhere to basic infection control measures by using gloves, gown, and mask are not at an increased risk for HCV.

5. Conclusion

This study revealed the prevalence of HCV infection among dentists in Iraq is low, and it seems that dentists who usually adhere to basic infection control measures by using gloves, gown, and mask are not at an increased risk for HCV.

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