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## Research Article

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### **AWARENESS OF HEPATITIS C AMONG DENTAL STUDENTS IN NORTH INDIA: A SURVEY**

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#### **ABSTRACT**

Hepatitis C is an endemic and a leading cause of morbidity and mortality among North Indians. The present study was designed to evaluate the degree of awareness and knowledge of Hepatitis C among dental students. 520 dental students were asked to fill a questionnaire to evaluate their knowledge about this deadly disease. The data was collected and analyzed. The results revealed that most of the dental students were ignorant about Hepatitis C and its mode of transmission, steps to prevent infection, associated complications and status of availability of vaccine against Hepatitis C virus (HCV).

**Keywords:** Hepatitis C, Awareness, Dental students.

#### **INTRODUCTION**

Hepatitis C is an infectious disease affecting primarily the liver, caused by the hepatitis C virus (HCV). The infection is often asymptomatic, but chronic infection can lead to scarring of the liver and ultimately to cirrhosis, which is generally apparent after many years. In some cases, those with cirrhosis go on to develop liver failure, carcinoma of liver or life-threatening esophageal and gastric varices.[1]

HCV is spread primarily by blood-to-blood contact, commonly associated with intravenous drug use, poorly sterilized medical equipment, and blood transfusions. An estimated 150–200 million people worldwide are infected

with HCV.[2-4] The existence of hepatitis C (originally identifiable only as a type of non-A, non-B hepatitis) was suggested in the 1970s and proven in 1989. [5]

The virus persists in the liver in about 85% of those infected. This chronic infection can be treated with medication, the standard therapy being a combination of peg-interferon and Ribavirin, with either Boceprevir or Telaprevir added in some cases. Overall, 50–80% of people treated are cured. Those who develop cirrhosis or liver carcinoma may require a liver transplant. Hepatitis C is the leading reason for liver transplantation, though the virus usually recurs after transplantation.[6] No vaccine against hepatitis C is

available.

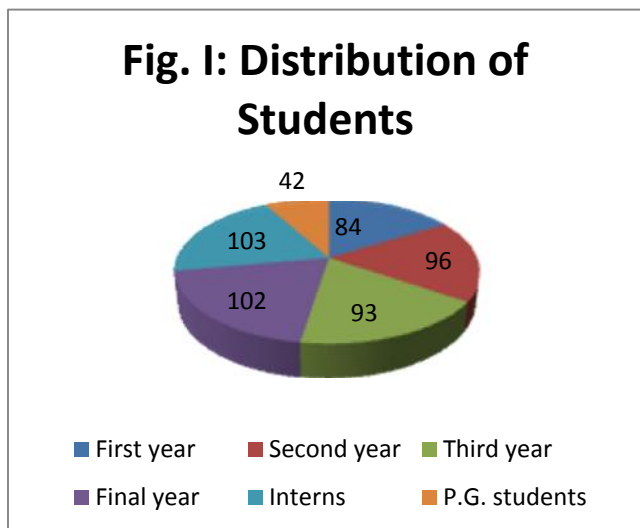
The present study was designed to gauge the awareness of dental students regarding Hepatitis C, its mode of transmission, steps to prevent infection, associated complications and status of availability of vaccine against HCV.

**MATERIALS AND METHODS**

The survey was conducted on 520 dental students in various dental colleges of North India. Under graduate students, interns as well as post graduate students were included in the study. They were asked to fill a questionnaire containing 11 questions of objective nature. The answers were analyzed to evaluate the level of knowledge regarding Hepatitis C, its mode of transmission, steps to prevent infection, associated complications and status of availability of vaccine against HCV.

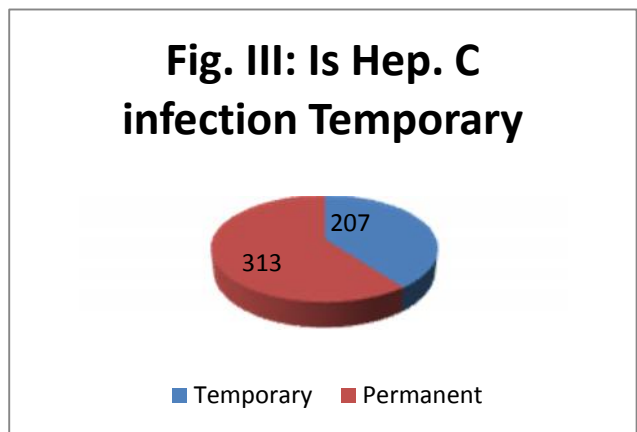
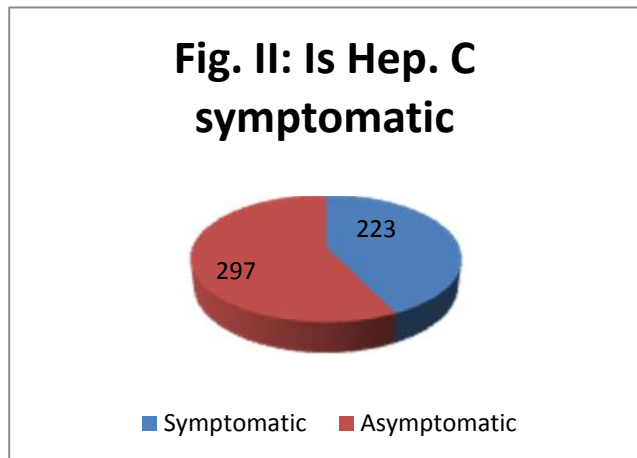
**RESULTS**

A total of 520 dental students, including undergraduate students, interns as well as post graduate students, were included in the study. Out of the total, 84 (16.15%) students were from B.D.S. first year, 96 (18.46%) from second year, 93 (17.88%) from third year and 102 (19.62%) from final year. In addition, 103 (19.81%) interns and 42 (8.08%) post graduate students also participated in the survey. [Fig. I]



All the participants of the survey had previously heard about Hepatitis C. 223 (42.88%) students said that Hepatitis C is symptomatic whereas 297 (57.12%) were of the view that it is an asymptomatic disease. [Fig. II] 207 (39.81%) students believed that Hepatitis C is a temporary infection, as

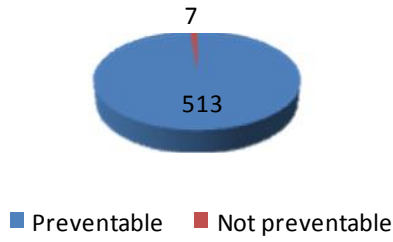
compared to 313 (60.19%) students who said that Hepatitis C infection is permanent. [Fig. III]



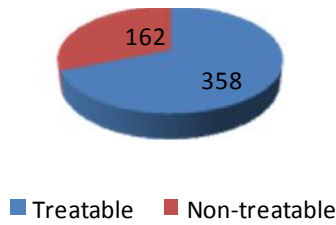
513 (98.65%) students said that this infection is preventable whereas 7 (1.35%) felt that Hepatitis C infection cannot be prevented. [Fig. IV] 358 (68.85%) students were of the view that once a person acquires Hepatitis C infection, it can be treated. 162 (31.15%) said that Hepatitis C infection is non-treatable. [Fig. V] When asked whether Hepatitis C infection can pose a threat to life, 412 (79.23%) said that the infection is life-threatening whereas 108 (20.77%) said that the infection poses no threat to one's life. [Fig. VI]

On being asked about the mode of spread of Hepatitis C infection, 502 (96.54%) were aware that Hepatitis does not spread by touching an infected person, 517 (99.42%) said that the infection can spread by coming in contact with infected blood, 279 (53.65%) were of the view that the infection can spread through saliva, 518 (99.62%) said that Hepatitis C infection can spread by using infected needles. 63 (12.12%) dental students were of the view that Hepatitis C infection does not spread via sexual contact and 187

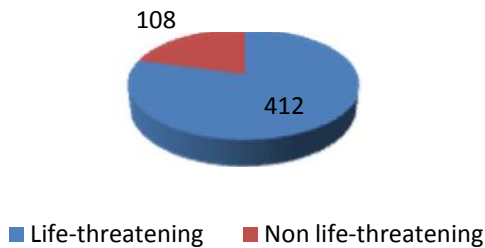
**Fig. IV: Is Hep. C preventable**



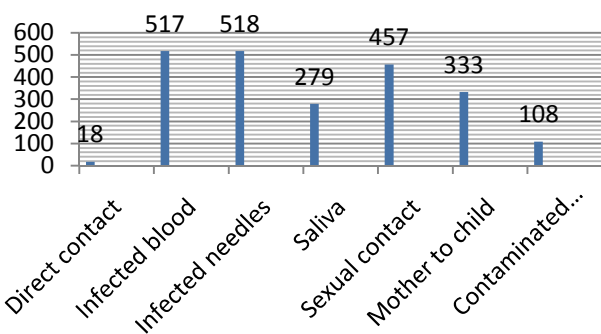
**Fig. V: Is Hep. C infection treatable**



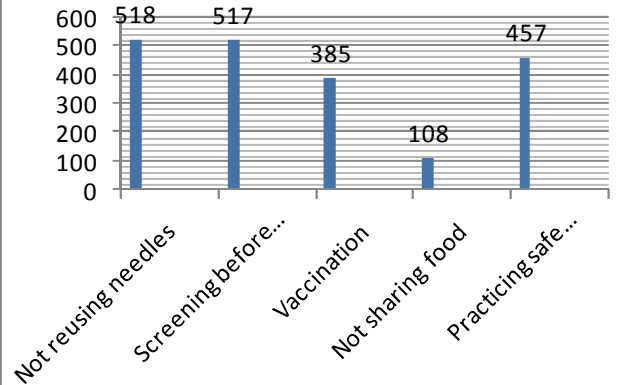
**Fig. VI: Is Hep. C infection life-threatening**



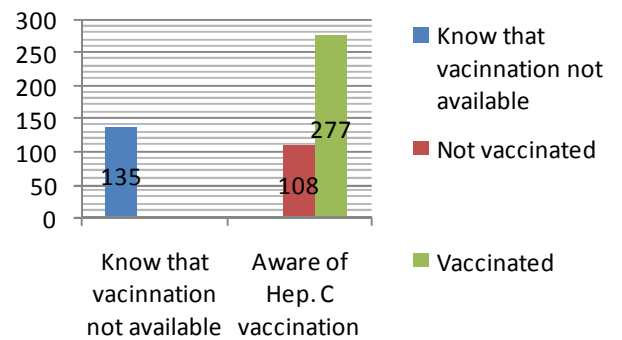
**Fig. VII: Mode of spread of Hep. C infection**



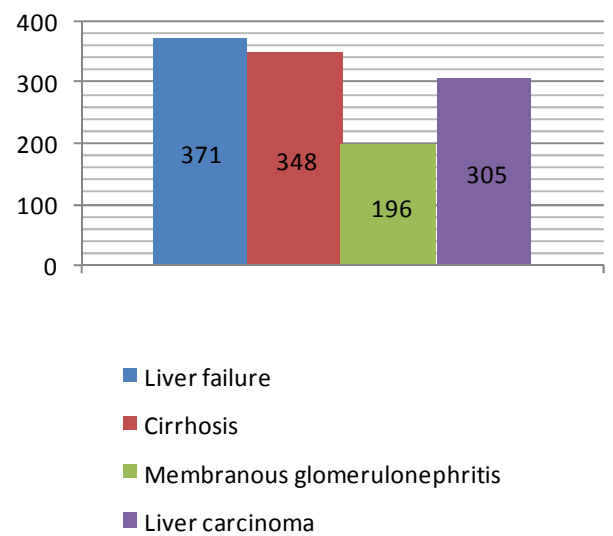
**Fig. VIII: Prevention of Hep. C**



**Fig. IX: Vaccination for Hep. C infection**



**Fig. X: Complications of Hep. C**



(35.96%) thought that the infection cannot spread to a child from her mother through the placenta. 108 (20.77%) students were of the notion that Hepatitis C can also spread by consuming contaminated food or water. [Fig. VII]

On being asked about the steps to prevent Hepatitis C infection, 518 (99.62%) said that the infection can be prevented by not reusing needles and 517 (99.42%) said that screening for HCV prior to blood transfusions can prevent infection. 385 (74.04%) students believed that Hepatitis C infection can be prevented by vaccination, and 108 (20.77%) were of the view that not sharing food or water with an infected person can prevent the spread of the disease. 457 (87.88%) students said that the infection can be prevented by not practicing unsafe sexual relations and by using condoms. [Fig. VIII]

On being asked about the availability of a vaccine against Hepatitis C, 385 (74.04%) students said that they were aware of availability of vaccine, and 277 (53.27%) even admitted to being vaccinated against the disease. [Fig IX]

When asked about the complications of Hepatitis C infection, 371 (71.35%) and 348 (66.92%) said that Hepatitis C may lead to liver failure and cirrhosis respectively. 196 (37.69%) students said that membranous glomerulonephritis is a complication of Hepatitis C and 305 (58.65%) said that Hepatitis C infection might cause carcinoma of the liver.

## DISCUSSION

Hepatitis C is a dreaded infectious disease and global public health problem which mainly affects liver functioning and sometimes causes irreversible liver injury. There might be a short asymptomatic period to a mild to potentially fatal and acute to chronic liver disease, which can result in either cirrhosis or hepato-cellular carcinoma.

Approximately 3% of the world's population is infected with Hepatitis C.[2-4] Most of the healthcare workers in India do not observe a proper protocol on a regular basis during their clinical practice, along with lack of proper knowledge regarding the transmission and prevention of Hepatitis C infection and its complications. The present survey was conducted to know about the awareness of Hepatitis C infection among dental students.

520 students from various dental colleges of North India participated in the current study. It was found that although each participant was aware of Hepatitis C, there was a lot

of difference of opinion regarding the mode of transmission, steps to prevent infection, associated complications and status of availability of vaccine against Hepatitis C virus (HCV).

There was a cloud of doubt among students about the symptoms of HCV infection, with 57.12% students of the view that it is asymptomatic. 39.81% students also believed that Hepatitis C is a temporary infection. 1.35% of the students also said that Hepatitis C infection cannot be prevented, 31.15% were of the view that Hepatitis C infection is non-treatable, and 20.77% said that the infection poses no threat to one's life.

3.46% thought that the infection can spread even by touching an infected person and 0.58% had no idea that the infection could spread by coming in contact with infected blood, and 0.38% did not know that using infected needles leads to spread of infection. 12.12% of the dental students were of the view that Hepatitis C infection does not spread via sexual contact and 35.96% thought that the infection cannot spread to a child from her mother through the placenta. 20.77% of the students thought that Hepatitis C can also spread by consuming contaminated food or water. Most of the students also did not have clarity about the steps to prevent Hepatitis C infection, with about three fourths of the students being under the perception that a vaccine is available against HCV.

In the present study, even though the study group constituted of well-educated dental students, they were not well aware of the disease. It is vital to make dental students aware of the gravity of the disease due to close proximity of the dental professionals to different kinds of patients, more so as no vaccination is available for Hepatitis C infection. A similar study done by Tripathi S et al also demonstrated the need for further education and awareness.[7]

## CONCLUSION

Future dental professionals lacking such knowledge may overlook the importance of screening asymptomatic patients, which would make them, as well as others, more susceptible to this, potentially fatal, infection. There is an urgent need for further HCV education and awareness among dental students.

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