

Original Article

Awareness of Hepatitis B in Pharm D students: Survey based study

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Abstract

Because of the importance of hepatitis B and the prevalence of contamination with hepatitis B virus, a survey of the students' knowledge about viral hepatitis B was conducted in Jinnah University for women Karachi Pakistan. This is a descriptive study performed in Jinnah University for women Karachi Pakistan. 189 students enrolled in pharm-d course were selected by our group for the survey. A structured questionnaire was designed to obtain information about their knowledge of hepatitis B. Research methodology requires gathering relevant data from the students in the form of survey form and compiling databases in order to analyze the material and arrive at a more complete understanding and awareness of the lives infected by hepatitis B and about the prevention of it with vaccinations. The results showed that only 22.3% tested themselves for hepatitis B while 77.6% subjects had no idea that they are infected or not because they were not tested. The study revealed that only 55.56% and 16.4% of the subjects had the knowledge about the symptoms and precaution to be taken respectively while majority of the subjects was aware that hepatitis B is only controlled by vaccination instead of that only 61.37% of the subjects had been vaccinated, 22.75% don't know whether they were vaccinated or not and 15.87% of them were not vaccinated against hepatitis B at the time of their birth; among the subjects who were not vaccinated, 6.35% people cached up the vaccination later. The majority of the subjects (73.01%) get the vaccination before travelling. Out of all 90% of the subjects thinks that hepatitis b can be caused by using infected needles and due to sexual contact with infected person only few of them thinks that it can be caused by chronic liver disease, end stage kidney disease, Thalessemia and HIV. This study showed that students' knowledge of hepatitis B was very weak.

Keywords: Hepatitis B; Knowledge ; Students.

Introduction

Hepatitis can be manifested in acute form with included severe jaundice, dark color urine, anorexia, severe fatigue, pain and tender in (RUQ) right upper quadrant. Viral hepatitis is one of the five important causes of premature death due to infection in the world. Survey showed at least one million people die from hepatitis in the world yearly. The average conclusion about two billion patients are suffering from hepatitis B in the world. Hepatitis is a preventable disease and the students of medical sciences have an effective role in its prevention. According to our knowledge from the survey basis undergraduate pharmacy students' knowledge about hepatitis B is low. The staff of health providing services should be familiar not only with treatment but also with epidemiological aspects of diseases such as transmission their prevention and control.

Hepatitis B is a serious liver infection caused by the hepatitis B virus (HBV). For some people, hepatitis B infection becomes chronic, leading to liver failure, liver cancer or cirrhosis a condition that causes permanent scarring of the liver. Most people infected with hepatitis B as adults recovered fully. Infants /children are more likely to develop a chronic hepatitis B infection. a vaccine can prevent the disease. If someone is already infected then by taking precautions will help prevent spreading HBV to others. Hepatitis B is a serious disease caused by a virus that attacks in the liver. The virus, which is called (HBV) hepatitis B virus a small, double-stranded DNA virus in the Hepadnaviridae family, can cause lifelong infection and cirrhosis (scarring) in the liver and may be liver cancer and liver failure and ultimately lead to death. In acute the initial infection with the hepatitis B virus and in chronic the hepatitis B virus remains in the blood for more than six months.

CAUSES

Hepatitis B is caused by the hepatitis B virus (HBV). HBV is a noncytopathic virus. This means that the virus itself does not cause direct damage to liver cells. It is the immune system's aggressive response to the virus that usually leads to inflammation and damage to the liver (hepatitis). However, HBV can cause damage to the genetic material inside liver cells.

SYMPTOMS

People with ACUTE HEPATITIS B (infection within 6 months) may have no symptoms, or may have mild flu-like symptoms, including fever, fatigue, loss of appetite, nausea, vomiting, abdominal pain, dark urine, clay-colored bowel movements, muscle and joint pain, and jaundice (yellow color skin or eyes). People with CHRONIC HEPATITIS B (infection longer than 6 months) usually do not have any symptoms for as long as twenty to thirty years. The chronic hepatitis B may cause liver damage, liver failure, liver cirrhosis (liver scarring), liver cancer, and death.

TRANSMISSION:

Hepatitis B can be spread via blood, semen, vaginal fluid, or other body fluid, such as by

- Birthing
- Having unprotected sex
- Sharing contaminated needles , razors ,syringes and toothbrushes
- Direct contact with blood or may be open sores of an infected person
- Hepatitis B can NOT be spread by sharing utensils, breastfeeding, hugging, kissing, holding hands, coughing, or sneezing.

Who Is At Risk?

Anyone can be infected with hepatitis B, but following people are at a higher risk:

- Infants born to infected mothers
- People who have sex with infected people
- Men who have sex with men
- Injection-drug users who share contaminated needle, syringes, or other drug equipments with infected people
- Healthcare workers who are exposed to blood on the job
- Hemodialysis patients
- People born in or who travel to countries with high rates of hepatitis B.

IMMUNIZATION SCHEDULE:

1) Hepatitis b vaccine schedule for infants born to hbsag positive women or women who's hbsag status is unknown

DOSE0.5ml in left leg

A) Hepatitis B Single Antigen Schedule:

- Dose 1 at birth
- Dose 2 at 1 to 2 months of age
- Dose 3 at 6 months of age (infant must not be less than 164 days of age on the day of the 3rd dose of the vaccine)

B) Hepatitis B Single Antigen and Combination Vaccine Schedule (i.e., pediarix or comvax)

- Dose 1 at birth – single antigen only (birth dose does not count as part of the 3-dose Hepatitis B series)
- Dose 2 at 2 months of age (Pediarix or Comvax)
- Dose 3 at 4 months of age (Pediarix or Comvax)

- Dose 4 at 6 months of age (Pediatrix) or 12- 15 months of age (Comvax)

2) INFANTS BORN TO Hbsag NEGATIVE WOMEN:

- Dose 1 at birth single antigen prior to hospital discharge (best within 12 hours of birth)
- Dose 2 at 1 to 2 months of age
- Use single antigen if infant is less than 6 weeks of age
- Use Pediatrix or Comvax if infant is 6 weeks to 2 months of age
- Dose 3 at 2 months of age (Pediatrix or Comvax)
- Dose 4 at 6 to 18 months of age, single antigen or Pediatrix (not less than 164 days of age) OR 15 to 18 months of age for Comvax

If the mother of a newborn carries the hepatitis B virus in her blood, her baby must receive the vaccine within 12 hours after birth, along with another shot .hepatitis B immune globulin (HBIG) to immediately provide protection against the virus. If a newborn's mother shows no evidence of the virus in her blood, the baby can receive the HBV any time prior to leaving the hospital.

CATCH UP SCHEDULE

- Administer the 3-dose series to those who were not previously vaccinated.
- 2-dose series of Recombivax HB® is licensed for children aged 11–15 years.
- For full protection, ONE will need three injections of hepatitis B vaccine over a period of four to six months. Then blood samples are taken one month after the third dose to check the vaccinations have worked. One should then be immune (resistant to the virus) for at least five years & can have a booster injection five years after the initial injection.

Tests to Diagnose Hepatitis B

- Hepatitis B Surface Antigen (HBsAg).
 - Positive test= is infected and need to see a doctor.
 - Negative test= not infected, but may be in incubation period.
 - This test is the primary way to diagnose chronic hepatitis B.
- Hepatitis B Surface Antibody (anti-HBs).
 - Positive test= had vaccine or recovered from acute hepatitis.
 - Negative test= need to get vaccinated.
- Total Hepatitis B Core Antibody (anti-HBc).
 - Positive test= currently infected or was infected
- IgM Hepatitis B Core Antibody (IgM anti-HBc).
 - Positive= acute infection, within the last 6 months.

- Hepatitis B "e" Antigen (HBeAg).
 - Positive= high levels of virus.
- Hepatitis B e Antibody (HBeAb or anti-HBe).
 - Positive= chronic HBV infection it has lower risk of liver complication because of low level of HBV

Tests to Monitor Hepatitis B

- ALT (alanine aminotransferase)- test for liver damage
- AFT (alpha-fetoprotein)- test for liver cancer
- Liver Ultrasound

Hepatitis B Viral DNA

- Complete blood count with platelet
- Prothrombin time (PT)
- Liver biopsy
- HBsAg and anti-HBs
- HBeAg and anti-HBe
- anti-HBc^{1,2}

Materials and Methods

In a study, 189 students from pharmacy faculty were selected. A questionnaire containing items about different aspects of hepatitis B was distributed among students of pharm D. The questions were multiple choices and based on the most reliable books on infection diseases. When the questionnaire started with questions asking the sex, age, field of studies. The rest of the questions were specific and related to hepatitis B, its transmission, prevention and symptoms. The questions included in this study were about:

1-General knowledge about hepatitis B

2-Knowledge about prevention, symptoms and transmission of hepatitis B

Results:

Gender was female. The maximum and minimum ages were 24 and 18, respectively. Descriptive results are presented in table 1:

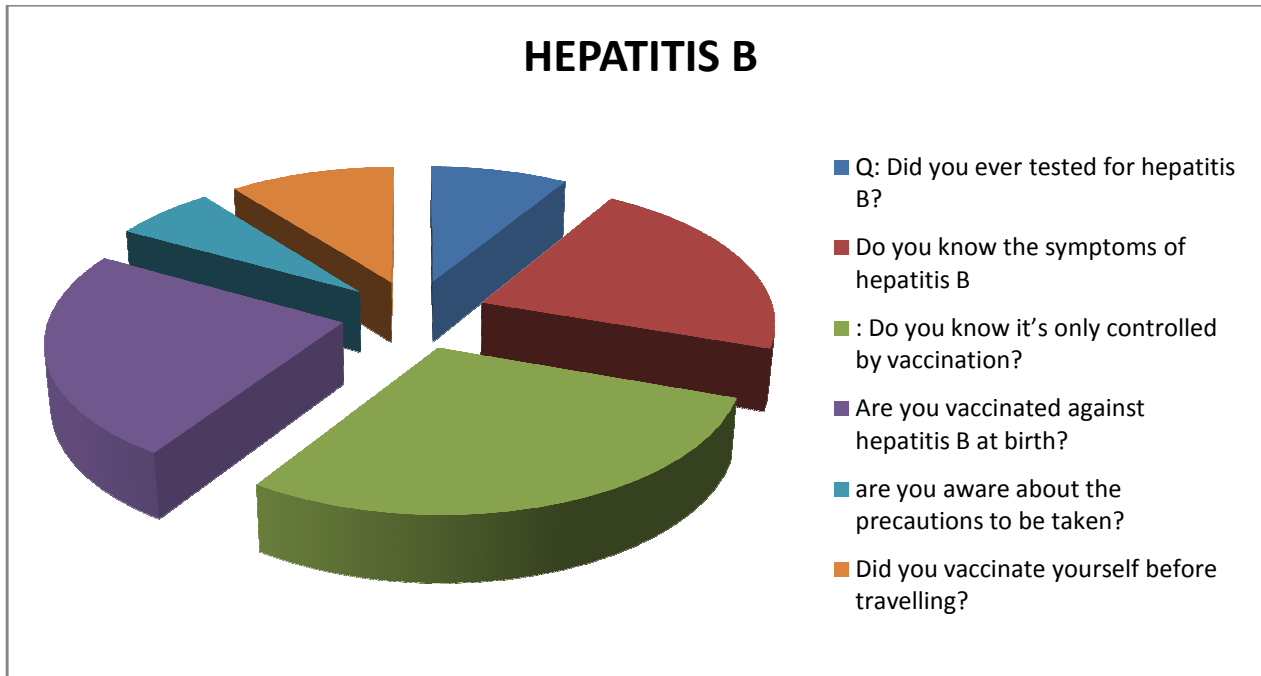


Figure 1: Result of the knowledge about hepatitis b virus among different students

Other question was general question to spread information and awareness program and that is seminars, media awareness, TV shows, playing videos on TV & in schools, colleges to educate people about hep b, distributing pamphlets, and by counseling.

Discussion

The results of this study show that the knowledge of students of pharm-d (pharmacy) Jinnah University for women Karachi Pakistan was very weak. Their knowledge about the prevention of disease. This study clearly shows that there was a significant relationship between knowledge of hepatitis B and age, educational level and major. A questionnaire including information on hepatitis B vaccine, symptoms associated with it and about transmission prevention, was distributed among the first, second, third, fourth and last year students. The results of our study showed that senior students had the highest level of information compared with other two groups. On the whole, however, they had little information about dose of vaccine, transmission, precautions and prevention. Information level of the students in higher semesters was much more than that of the students in lower semesters.

Since the students of medical sciences play an important role in prevention of the disease, it is very essential that medical universities pay more attention to informing and educating them. Another research is needed to study the reason(s) why information level of the students of medical is low therefore suitable ways are chosen to increase this level. It is improve by education and to increase the training hours related to epidemiology of prevalent infectious diseases. Furthermore, ordinary people

who have very little knowledge of the disease should also be educated. Also public education program must be designed to meet the objectives. Results of this study have potentially showed that there is strong need to facilitate awareness among people about hepatitis B, its vaccine & acceptance of vaccines by arranging seminars in which students can get enough knowledge, to get attention of common man towards the severity of the disease and the necessity of vaccination can be effectively done by using media for this purpose, counseling each and every person of every age group and by distributing pamphlets to those who are so busy in their work and have no time to watch TV & attend seminars

Table 1:Questionnaire about hepatitis B

QUESTIONNAIRE	YES	NO	DON'T KNOW
Q: Did you ever tested for hepatitis B?	Y=22.3%	N= 77.6%	
Q: Do you know the symptoms of hepatitis B	Y=55.56%	N=44.4%	
Q: Do you know it's only controlled by vaccination?	Y=74.07%	N=25.92%	
Q: Are you vaccinated against hepatitis B at birth?	Y=61.37%	N=15.87%	22.75%
Q: If not did u catch up vaccination later?	Y=6.35 %		
Q: if yes then what is the schedule of the vaccination means how many injections are injected?	Many of them said 1 injection for life time.		Majority said 3 injections but don't know when.
Q: are you aware about the precautions to be taken?	Y=16.4%	N=83.26%	
Q: Did you vaccinate yourself before travelling?	Y=26.9%	N=73.01%	
Q: what do think how hepatitis is caused?	Using infected needles.		

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