

# KNOWLEDGE AND PRACTICES REGARDING HEPATITIS B VIRUS INFECTION AND ITS PREVALENCE AMONG BARBERS OF RURAL AREA OF RAHIM YAR KHAN

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## ABSTRACT

**Background:** HBV infection is the global issue in developing world. **Objective:** To assess the knowledge and practices regarding hepatitis B virus infection among barbers of rural areas of Rahim Yar Khan. **Methodology:** Study Design: Cross sectional study. Study Setting: Rural area of Khanpur, District Rahimyar Khan. Study Duration: 1<sup>st</sup> July to 31<sup>st</sup> December 2017. Sample size: 100 barbers. Sampling technique: Non probability / purposive sampling. Inclusion criteria: 100 barbers working in rural area of Khanpur, District Rahimyar Khan with work experience more than 3 months were included. Data collection and analysis: A structured closed ended questionnaire was filled by non-probability convenience sampling technique and 3 ml Blood sample was collected from each barber and tested for HBsAg. Frequencies and percentages were computed using IBM SPSS 20. **Results:** The prevalence of HBV infection among barbers was 4%. Overall knowledge about HBV infection and its transmission was poor in 70% of barbers. 18% barbers know liver as the organ affected by HBV and 67% knew about its transmission by razors, 90% barbers used antiseptic solution after each client and only 13% had undergone screening tests for HBV infection. **Conclusion:** The knowledge of the barbers regarding HBV in this study was poor. By launching health education and motivational programs, barber's knowledge and attitude towards safe practice can be improved. Registration and regular monitoring of barbers will help to improve compliance to attend these programs and to achieve healthy practices by barbers.

**Key words:** Hepatitis B, Knowledge, Practices, Prevalence, Barbers.

## INTRODUCTION

Hepatitis B infection is one of the major global health problems especially in the developing countries leading to increase morbidity, mortality and national economic burden.<sup>1,2</sup> About two billion people are suffering from hepatitis B infection worldwide.<sup>3,4</sup> Four hundred million people are infected with chronic HBV infection<sup>5</sup> and more than one million people die every year due to complications of hepatitis B, including cirrhosis and liver cancer (fifth most frequent cancer death).<sup>6,7</sup> HBV infection is still highly endemic in Pakistan. In Pakistan prevalence rate of hepatitis B infection ranges from 2.5 to 10%.<sup>8</sup> It has been estimated that 3% of general population and 6-12% of high risk groups in Pakistan are in chronic carrier state of hepatitis B infection.<sup>9</sup>

Hepatitis B virus is transmitted through blood, serum, body fluids, semen and saliva. HBV can survive for several days in dried blood, on syringes and razors.<sup>10</sup> Hepatitis B virus infection is more infectious than HIV and HCV infectious, 50 - 100 times and 10 times respectively. So a low infectious dose of HBV contaminating blade or razor can transmit infection.<sup>11</sup> Literature on seroprevalence of HBV among barbers is limited.<sup>2</sup> Barbers have important role in community and are still owned and financed by the community but

majority of them do not have sufficient knowledge about hepatitis and also do not have healthy working practices in barbering.<sup>12</sup> In Pakistan, in addition to performing hair cutting, nail trimming, pedicure and dying of hairs, some barbers perform circumcision and abscess drainage especially in rural areas.<sup>13</sup> Barbers may be high risk factors for transmission of HBV because of carelessness in use of instruments and unsterilized instruments.<sup>11-16</sup>

In Pakistan, limited efforts are used to make policy governing registration of barbers.<sup>8</sup> Furthermore, no scrutiny measures are here to stop their risky practices (blade reuse, use of antiseptics, cleanliness of the workplace and self-hygiene). Exposure to blood of customers combined with factors such as low literacy and poor working conditions can put barbers at an increased risk of HBV.<sup>8</sup>

We conducted this study in order to determine the HBV serology status and the knowledge, and practices of barbers in rural areas of Khanpur, Rahimyar Khan.

## METHODOLOGY

A cross sectional study was conducted at Barber Shops and Roadside practicing barbers in 20 Union Councils of rural area of Khanpur Tehsil, District Rahimyar Khan from 1<sup>st</sup> July to 31<sup>st</sup> December 2017. A sample size of 100 barbers was calculated with

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95% confidence level and 10% acceptable difference, assuming 50% of barbers have adequate knowledge using non probability / purposive sampling technique. All barbers with work experience of >3 months were included in the study. As there was no official record of barber shops in Khanpur Tehsil, a crude map out of all the barber shops was made. Barber shops and the barbers working on roadside were approached. The purpose of the study was explained to them. Written consent from barbers was taken along with the guarantee of maintaining confidentiality. The benefits of undergoing the screening for Hepatitis B were explained. The consenting barbers were given a questionnaire to fill it out. Those who were unable to read and write; all the questions were read aloud to them and their answers were documented. The questionnaire was translated to Urdu for the sake of ease of the participants. 3ml Intravenous Blood was drawn and serum was separated. This serum was used for testing the presence of HbsAg by HbsAg Kits. Data was entered and analyzed by using SPSS version 20. Mean and standard deviation were calculated for numerical variables like age, duration of occupation. Frequency and percentages were calculated for nominal variables, like education status, occupation status and knowledge.

## RESULTS

Mean age of study population was about  $28.12 \pm 10.50$  years with minimum and maximum age 14 and 65 years respectively. All the barbers participated in study were male with working experience of  $11.58 \pm 8.72$  years with 57% having work experience less than 10 years. Approximately 47% of the respondents completed their primary education with 53% no education. (Table I) The prevalence of hepatitis B virus infection among the study population was 4%.

Table II shows the hepatitis B related knowledge attitude and practices of barbers among the study group of barbers. The majority did not have good knowledge about hepatitis B (19%), its transmission (18.8%), its effects on liver (18%), and long term effects on body (8%) and about hepatitis B vaccine (6%).

There was adequate knowledge about transmission by blades (67%) and consultation for HBV infection from qualified doctors (79%). In

this study 70% of the barbers had poor knowledge (score 0-3) and 29% had average knowledge (score 4-6) and only 1% good knowledge (7-9). (Table III)

**Table I: Socio demographic profile of barbers**

Variables	Frequency	Percent
<b>Age groups</b>		
< 35 years	77	77
36 – 65 years	23	23
<b>Work experience</b>		
< 10 years	57	57
≥ 11 years	43	43
<b>Education</b>		
Illiterate	53	53
Literate( at least primary class passed)	47	47
<b>Risk factors</b>		
Ever experienced injury to you while using blades?	75	75
Undergone any dental procedure?	31	31
Relatives with Hepatitis B infection?	15	15
Tattoo on your body?	10	10

The most of the barbers were used to wash blades with water (97%) between shaving and they cleaned razors with antiseptic solution (90%), 96% of barbers changed blades between shaving different person. The circumcision was done by 17% and incision/drainage by 18% of barbers in study group. Only 13% of barbers were screened for hepatitis B virus infection.(Table II)

**Table II: Knowledge and practices among barbers (Multiple response yes frequencies)**

Knowledge	Responses	
	No	Percent
What is Hepatitis B?	19	19%
Is it transmitted via blood and body fluids?	18	(18%)
Liver is organ it affects the most?	18	18%
Qualified doctor should be consulted about its treatment?	79	79%
Can it lead to cancer?	28	28%
Can it lead to lifelong infection?	8	8%
Can it be transmitted from Mother to her child during pregnancy?	39	39%
Do you know it can be transmitted by blades?	67	67%
Do you know about Hepatitis B Vaccine?	6	6%
<b>Practices</b>		
Do you wash blades with water after usage?	97	97%
Do you clean them with antiseptic solution after use on a customer?	90	90%
Do you change blades after each client?	96	96%
Frequently use potash alum?	38	38%
Have you ever vaccinated against HBV infection?	9	9%
Have you ever undergone screening for HBV infection?	13	13%
Have you ever done circumcision?	17	17%
Have you ever done Incision/ drainage of abscess?	18	18%
Have you ever donated blood?	5	5%

**Table III: Knowledge Score**

	Frequency	Percent
Poor Knowledge (Score 0 - 3)	70	70
Average Knowledge (Score 4 - 6)	29	29
Good Knowledge (Score 7 - 9)	1	1
<b>Total</b>	<b>100</b>	<b>100</b>

## DISCUSSION

Studies conducted so far have shown the risk of HBV transmission to the customers while shaving by barbers and vice versa.<sup>17</sup> Barbers related risks for hepatitis B virus infection are preventable sources for spreading hepatitis B infection.<sup>18</sup> Not many studies had been conducted previously in Southern Punjab to assess the prevalence, knowledge and attitude of barbers regarding hepatitis B infection especially in rural areas. This study was performed in rural area of Tehsil Khanpur, District Rahimyar Khan to know the prevalence and knowledge in barbers about HBV. Our study had shown poor knowledge in barbers for hepatitis B.

The prevalence of HBV infection in our study was 4% which was more than 3% infected general population of Pakistan.<sup>19</sup> Studies have shown significant difference in prevalence of HBV infection among barbers of different regions. In Sukkur (Pakistan), Morocco and Ghanathe prevalence rate was 2.5%, 28.1% and 14.5% respectively.<sup>11,16,20</sup> This change in HBV epidemiological pattern can also be related to various environmental factors and host characteristics (barber's attitude) towards risks of HBV infection associated with their avoidance of unsafe practices.

Only 19% of barbers participating in this study knew about hepatitis B infection which coincided with other study that revealed 20.5%.<sup>13</sup> Knowledge about HBV transmission via blood, sexual contact and mother to child during pregnancy and child birth was poor in our study. This study showed only 18% of the study population were aware of HBV transmission via blood and body fluids while studies reported 37.8% and 48.5% of barbers with this knowledge.<sup>11,13</sup>

Generally, attitude of the barbers towards performing safe practices was favorable. However, low percentage of barbers (13%) had undergone screening tests for HBV infection

which is consistent with the result of study done in rural area of Rawalpindi and Islamabad.<sup>2</sup> This is in contrast to study in Sindh where 92.2% barbers were willing for screening for HBV.<sup>11</sup> The proportions of barbers vaccinated against barbers were very low (9%) that was almost similar to the barbers in Bahra Kahu Islamabad.<sup>13</sup>

Our study had some limitations. The study included barbers from rural area of Khanpur Tehsil where literacy rate is different from city area which can affect knowledge and attitude of barbers differently. The barbers may have misunderstood the questions. The attitude and practices are reported by barbers who can be affected by wish bias.

## CONCLUSION

The barbers, especially in rural areas, come in high risk group for getting HBV infection and spreading it to others because of poor knowledge. Health education and motivational programs must be launched involving barbers and providing them with the importance of use of safe kits while shaving and cutting hairs. Registration of barbers in this regard will help us to ensure healthy standards of practices by them and will make sure their participation in educational programs.

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