

Study on Hepatitis B immunization and Antibody Level in Health Care Workers, District Base Hospital, Wathupitiwala

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Introduction

Hepatitis B virus (HBV) is a blood born pathogen leading to cirrhosis and hepatocellular carcinoma. It is transmitted mainly through contaminated blood or blood products from an infected person. It has the highest potential to transmit through prick injuries as one in three infected punctures. Therefore, health care workers (HCWs) are at great risk of contracting the infection during patient care. Hence, HBV immunization and having protective antibody levels are mandatory for HCWs.

Objective

To find out the immunization status and antibody levels of healthcare workers in a single health care center.

Methodology

A descriptive cross-sectional study was conducted prospectively involving sixty HCWs at District Base Hospital, Wathupitiwala from 01.08.2019 to 30.10.2019. The HCWs were selected as per hospital units/wards considering the risk of exposure since limited availability of laboratory testing facility for hepatitis B surface antibody. The demographic and immunization data of HCWs were obtained using a questionnaire. All HCWs who have not been checked the HBV antibody levels were subjected to HBV antibody testing using enzyme-linked immunosorbent assay (ELISA). Having hepatitis B surface antibody level of ≥ 10 mIU/ml were considered as immune against HBV infection.

Results

Of the total HCWs of 60, 33 nursing officers, 13 doctors, seven health care attendants, six medical laboratory technologists and one midwife were included for the study. The study population consisted of 48 females and 12 males. Amongst the study subjects, three doses of HBV vaccine were completed in 48, only two doses were received in seven and only one dose was received by five HCWs. Of the 48 HCWs who had completed three doses of HBV vaccination, none had checked their antibody levels. Yet, of the 48 who completed full course three doses of vaccine, 46 have developed sufficient antibody levels. Of the seven HCWs who had two HBV vaccine doses, four developed sufficient antibody levels whereas of the five who received only a single dose of vaccine, two developed sufficient antibody levels. Of the sixty health HCWs, 52 were immune against HBV.

Conclusion

In the investigated cohort of HCWs, all had the prior HBV vaccine. However, only 80% have completed the full course of HBV vaccination and none had checked antibody levels following vaccination. Nonetheless, the majority (86.6%) of the HCWs were immune against hepatitis B. The development of HBV antibodies was 95.8% following immunization with the complete regime (three doses), 57.1% following only two doses and 40% following a single dose of vaccination.

Keywords: “Hepatitis B immunization; Healthcare workers; Hepatitis B antibody level”

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