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SEROLOGICAL TESTING FOR HEPATITIS B SURFACE ANTIGEN, HEPATITIS C VIRUS AND HIV IN PATIENTS ATTENDING DENTAL SCHOOL CLINICS IN JEDDAH, SAUDI ARABIA

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ABSTRACT

Viral hepatitis is transmissible and the prevalence of hepatitis is 2 - 5 times greater among dentists than in the general population. Further, hepatitis C virus (HCV) is highly infectious and was reported to be present in saliva. In this study, blood samples from 446 adult patients attending King Abdulaziz University Dental Clinics in Jeddah, Saudi Arabia, were analyzed. For each patient, relevant dental and medical histories were obtained. Blood samples were tested for HIV I/II antibodies, HCV antibodies and hepatitis B surface antigen (HBsAg). The results showed that of the studied sample, 4.7% were HBsAg positive, 2% were HCV positive and none was HIV positive. The patient's birthplace, history of tooth extraction, HBV immunization, hospitalization and blood transfusion were significantly associated with serostatus.

INTRODUCTION

Dentists and other dental health care workers have always been at risk for occupationally acquired infections. However, since the identification of human immunodeficiency virus (HIV), widespread concerns have surfaced regarding effective measures for preventing cross-contamination and occupational infections in dentistry. Nevertheless, HIV is relatively easy to inactivate, and it appears that greater danger lies with hepatitis B and C viruses (HBV and HCV). HBV is a major cause of acute and chronic hepatitis, cirrhosis and hepatocellular carcinoma. The frequency of HBV infection and routes of transmission vary markedly in different parts of the world. In the United States, Western Europe and Australia, it is a disease of low endemicity, with only 0.1% - 0.5% of the population being virus carriers, and infection occurs primarily during adulthood⁽⁴⁾. In contrast, HBV infection is highly epidemic in China, Southeast Asia and sub-Saharan Africa. In these areas, 5% - 15% of the population carry the virus, and most persons acquire infection at birth or during childhood⁽⁴⁾. In other parts of the world, HBV is moderately endemic and 1% - 4% of persons are HBV carriers⁽⁴⁾. Hepatitis C virus is a parenterally transmitted cause of non-A-non-B hepatitis and has many features in common with HBV⁽²⁴⁾.

In the Kingdom of Saudi Arabia, an area in

which hepatitis is moderately endemic, studies have shown differences in HBV seropositivity among various provinces. Through a hospital program in the Riyadh area among 7894 in- and outpatients screened for hepatitis B surface antigen (HBsAg) seropositivity, 7.31% were found to be positive⁽²⁾. Also, in the same area, the prevalence rate among male blood donors was 6.1% and among female blood donors it was 4.71%⁽¹²⁾. In the Gizan area (Southwest), 24% and 36% of male and female outpatients, respectively, were found to be HBsAg positive⁽⁸⁾.

In Jeddah, the entry gate to Saudi Arabia, fluctuation of reported prevalence rates of HBV and HCV is uncommon. Screening of blood donors and pregnant women attending general clinics in Jeddah resulted in HBsAg seropositivity rates of 10.6%⁽²¹⁾ and 2.31% respectively.

In Saudi Arabia, the overall prevalence rate of HBV seropositivity is 6.7%⁽³⁾ and acquisition of HBV infection is reported to peak early in life. Furthermore, two peaks of HBV prevalence were observed, in 7- and 10-year-old children, respectively⁽³⁾. Prevalence rates of hepatitis C infection among several groups of residents in Saudi Arabia have received equal attention. Anti-HCV antibodies were detected in 65% of patients with chronic active hepatitis and in 44% of patients with liver cirrhosis in the Asir region (Southwest)⁽¹³⁾. In Jeddah region, the overall ser-

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