

Factors affecting responsiveness to hepatitis B immunization in dialysis patients

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Abstract

Background Hepatitis B virus (HBV) and hepatitis C virus (HCV) infections are widespread health problems all over the world and have high morbidity and mortality. Hemodialysis patients are more frequently exposed to these viruses as they have poor immune system and frequently undergo parenteral interventions. The vaccination against HBV prevents infection and it has been recommended for the prevention of HBV infection in all susceptible dialysis patients. This study aimed to determine the seroprevalence of HBV and HCV infections and analyzed the factors affecting inadequate response to HBV vaccine in dialysis patients.

Methods The data for 584 dialysis patients that were followed up at seven dialysis centers were analyzed. The patients received four doses of 40 µg recombinant hepatitis B vaccine at 0, 1, 2, and 6 months and were tested for anti-HBs titer after one month of completion of vaccination. If patients showed a titer of anti-HBs <10 IU/mL, an additional 40 µg in four vaccine doses was administered immediately and they were retested for the anti-HBs following the same schedule. The patients were divided into two groups: responders and non-responders.

Results HBsAg and anti-HCV seroprevalence was 3.4% and 10.3%, respectively. After vaccination schedule, 264 (83.5%) patients had antibody response to HBV vaccine and 52 (16.5%) had no response. Hepatitis B vaccine

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