Evaluating the effect of phlebotomy on the serum level of antibody against HBS antigen following hepatitis B vaccination

A. Zarifkar PhD., Z. Amirghofran PhD., H. Habibi MD, R. Mansuri MD

Abstract:

Introduction: Phlebotomy is one of the main components of the Islamic medicine, which is still in use for the purpose of treatment of fever and inflammatory diseases. Although it has been effective in treatment of a wide spectrum of diseases, its mechanism of action is not still accurately determined. One hypothesis in this regard proposes that phlebotomy modulates immune system. Thus, we have evaluated the probable effect of phlebotomy on immune system modulation by measuring the serum level of hepatitis B antibody after hepatitis B vaccination.

Methods: In the study, two groups (experiment and control) each consisted of 25 young male volunteers in the age range of 18-25 were evaluated. The participants of the two groups received hepatitis B vaccine twice, with one month interval. The experiment group participants also underwent phlebotomy one time. The hepatitis B antibody titer was measured three times (before, one month after, and three months after vaccination) using ELISA in IU/L.

Findings: The results showed that the antibody level increase to 81.3 and 57.46 IU/L one and three months, respectively, in the control group, while the level in the experiment group was 41.3 and 16.26 IU/L one and three months after vaccination, respectively. In spite of the lower increase in antibody titer of the experiment group after three months, the difference was not statistically significant.

Discussion and conclusion: Immunization with hepatitis B vaccine led to an increase in specific antibody production in both groups. It seems that phlebotomy in men of this age range does not affect the level of antibody production.

Keywords: Phlebotomy; Hepatitis B antibody; Hepatitis B vaccine.
Corresponding Author: A. Zarifkar
Email: zarifkara@sums.ac.ir

[Downloaded from jiitm.ir on 2026-09-13]