



# Long-term immune effects of different vaccination regimens for hepatitis B vaccine among patients receiving methadone maintenance treatment: Secondary analysis of a randomized clinical trial

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## Abstract

**Objective:** To explore the long-term immune effects of different vaccination regimens for hepatitis B vaccine in methadone maintenance treatment patients.

**Methods:** The randomized, double-blinded, parallel-controlled trial (receiving three intramuscular injections of 20 µg or 60 µg recombinant hepatitis B vaccine at months 0, 1, and 6, respectively, Abbreviated as IM20 × 3 or IM60 × 3) in MMT patients was conducted from September 2014 to December 2015 at first trial stage. At secondary trial stage, we compared the long-term immune effects of different vaccination regimens during 3-year follow-up extended to September 2018 in 144 MMT patients who were tested at months 7.

**Results:** The long-term immune effects on different follow-up times of IM20 × 3 and IM60 × 3 regimen of recombinant hepatitis B vaccine were: GMC of anti-HBs, positive conversion rate, hyper-response rate: (630.400 mIU/mL vs. 742.900 mIU/mL), (80.82%, 59/73 vs. 87.32%, 62/71), (42.47%, 31/73 vs. 56.34%, 40/71) at months 7; (405.600 mIU/mL vs. 331.300 mIU/mL), (61.97%, 44/71 vs. 67.74%, 42/62), (23.94%, 17/71 vs. 30.65%, 19/62) at months 18; (218.500 mIU/mL vs. 291.500 mIU/mL), (56.41%, 22/39 vs. 62.86%, 22/35), (15.38%, 6/39 vs. 28.57%, 10/35) at months 30; (71.040 mIU/mL vs. 100.300 mIU/mL), (52.78%, 19/36 vs. 65.52%, 19/29), (16.67%, 6/36 vs. 24.14%, 7/29) at months 42. There was no significant difference at different follow-up times ( $P > 0.05$ ).

**Conclusion:** The three 60 µg hepatitis B vaccination yield a similar long-term immune effects compared to the 20 µg vaccination.

## Biography:

Yongliang Feng is an Associate Professor of Epidemiology from Shanxi Medical University, Taiyuan, China. He has been working in the field of epidemiology since 2005. He has been the Principal Investigator for 1 grants from the National Natural Science Foundation of China (NSFC), and 5 projects from the Ministry of Science and Technology, Shanxi Provincial Foundation and Shanxi Medical University. His

research mainly focuses on the immunogenicity and safety of hepatitis B vaccine among people at high risk for HBV infection. His research also focuses on investigating the environmental and genetic factors on risk of mother-baby infection of hepatitis B virus and its immunological profile as well as its mechanism. He has published more than 50 research papers in academic periodicals at home and abroad, and wrote or participated in compiling 4 treatises and textbooks.