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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 e ects of di erent 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 εg or 60 εg recombinant hepatitis B vaccine at months 0, 1, and 6, respectively, Abbreviated as IM20 Ĭ 3 or IM60 Ĭ 3) in MMT patients was conducted from September 2014 to December 2015 at ýrst trial stage. At secondary trial stage, we compared the long-term immune e ects of di erent 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 e ects on di erent follow-up times of IM20 Ĭ 3 and IM60 Ĭ 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 signiýcant di erence at di erent follow-up times (P>0.05).

Conclusion: The three 60 εg hepatitis B vaccination yield a similar long-term immune e ects compared to the 20 εg vaccination.