疫情報導
TAIWAN EPIDEMIOLOGY BULLETIN
September 4, 2018 Vol.34 No.17

Original Article

Evaluation of the Effectiveness of Hepatitis A Vaccination for Post-Exposure Prophylaxis in Taiwan, 2016

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Abstract

The number of hepatitis A confirmed cases had increased since June 2015 in Taiwan. According to the surveillance data compiled by Taiwan Centers for Disease Control (TCDC), 1,133 cases were confirmed in 2016, and the age of the most cases ranged 20–39 years old. About 60% of these cases also had HIV, syphilis or gonorrhea, and unsafe sex between men and men was the main risk factor of this outbreak. In order to control this outbreak, TCDC implemented "Free Hepatitis A Vaccination Pilot Program for Contacts of Confirmed Cases" since January 2016, providing a free dose of hepatitis A vaccine to family members, sexual partners and household contacts of hepatitis A confirmed cases.

To assess the effectiveness of the hepatitis A vaccine applied as post-exposure prophylaxis (PEP) in preventing infection among contacts of hepatitis A confirmed cases, we collected the contacts information from Taiwan's notifiable disease system. Totally 1,001 contacts were eligible for the program, and 979 persons were suggested to receive the post-exposure vaccination. Among the 979 contacts, 920 (94.0%) were vaccinated, of which 720 (78.3%) accomplished the PEP vaccination on schedule. After follow-up, the attack rate of unvaccinated and vaccinated contacts was 8.47% and 1.67%, respectively. The relative risk (RR) was 0.20 (95% CI: 0.07–0.54), and the vaccine effectiveness was 80.3% (95% CI: 46.1%–92.8%).

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DOI: 10.6525/TEB.201809_34(17).0001
Received: Nov. 23, 2017
Accepted: Jun. 28, 2018

Timely administration of hepatitis A vaccine in PEP is important and the vaccine effectiveness is high in contacts. Therefore, in order to prevent contacts of hepatitis A confirmed cases from infection after exposure and avoid the risk of virus transmission in community, hepatitis A PEP is highly recommended.

Keywords: acute hepatitis A, contacts, post-exposure prophylaxis