EDITORIAL

Post-exposure prophylaxis for hepatitis A: immune globulin, vaccine or both?

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Key words

Postexposure • Prophylaxis • Hepatitis A • Immune globulin • Vaccine

Hepatitis A (HAV) causes one of the most common infectious diseases in the world and may produce clinical conditions ranging from a-symptomatic infection to acute liver failure. Hepatitis A infection is an endemic problem in most African and South American Countries, meanwhile its incidence has largely declined over the last 2 decades in Western Europe and USA [1, 2].

The traditional preventive measure for hepatitis A infection is passive immunization with immune globulin. According to recent recommendations, serum gamma globulin administration could be replaced by vaccinations for post-exposure prophylaxis because of the progressively lower anti-hepatitis A virus content of gamma globulin and the short duration of the protective effect [2-4].

Recently, Victor et al. [5] conducted two-arm clinical trail, in Kazakhstan, to compare hepatitis A vaccine with immune globulin for post-exposure prophylaxis to contacts of patients with hepatitis A. Of 4524 contacts who underwent randomization, 1414 (31%) were susceptible to hepatitis A virus and 1090 were eligible for the per-protocol analysis. Among these contacts, 568 received hepatitis A vaccine and 522 received immune globulin. Symptomatic infection with hepatitis A virus was confirmed in 25 contacts receiving vaccine (4.4%) and in 17 contacts receiving immune globulin (3.3%) (relative risk, 1.35; 95% confidence interval, 0.70 to 2.67). The Authors concluded that both hepatitis A vaccine and immune globulin provided good protection after exposure, and hepatitis A vaccine may be a reasonable alternative to immune globulin for post-exposure prophylaxis.

I have deep concerns regarding the study conclusions and recommendations, especially that we can not generalize or at least apply these recommendations in the European Countries.

First, immune globulin provided better protection than hepatitis A vaccine, although without significant difference; 17 of 522 contacts *vs* 25 of 568 contacts developed clinical symptoms of hepatitis A plus IgM-positive and ALT ≥ twice ULN respectively. This better protection was more clear on comparing the development of clinical and subclinical hepatitis A in contacts of hepatitis A patients; 35 of 522 contacts *vs* 49 of 568 contacts respectively.

Second, contacts who received immune globulins and posteriorly developed hepatitis A had lower levels of ALT together with less GIT symptoms and jaundice compared with contacts who received hepatitis A vaccine and posteriorly developed hepatitis A. The severity of illness measured by ALT level at time of illness shows statistical significance; 725 ± 461 U/liter in contacts who received immune globulin *vs*. 1001 ± 397 U/liter in contacts who received hepatitis A vaccine.

Third, previous studies showed that the efficacy of hepatitis A vaccine when time since exposure is prolonged (more than 1 week from onset of illness in the index case) is likely to be significantly lower than immune globulin. It is recommended for travellers to endemic areas to receive hepatitis A vaccine > 2 weeks before leaving, meanwhile travellers leaving before day 14 should receive immune globulin plus vaccine [1, 6].

Finally, prescribing of hepatitis A vaccine rather than immune globulin could be cost effective in endemic areas, like Kazakhstan, where hepatitis A incidence is high [5]. Meanwhile in Western Countries where hepatitis A incidence is low or very low effectiveness overweight cost in post-exposure prophylaxis of hepatitis A. In Spain, where the incidence of hepatitis A is less than 2-9/100000 inhabitants in 2002-2004 [7], it is recommended to prescribe household contacts of index patients with hepatitis A immune globulin and hepatitis A vaccine simultaneously.

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