

Recommended Strategies on Hepatitis A Vaccination in Hong Kong

Background

1. Hong Kong is described as a place with intermediate rate for hepatitis A infection. Viral hepatitis is a statutory notifiable disease and each year a few hundred cases of hepatitis A are reported to the Department of Health¹. Two outbreaks have been recorded in the last twenty years – in 1988 and in 1992.
2. With improved sanitation and standard of hygiene, hepatitis A antibody levels have been declining in the local community, resulting in an accumulation of susceptible individuals, in particular those under the age of 30. Other risk factors associated with hepatitis A infection are: (1) travelling to endemic areas, (2) abundance of infected shellfish, and (3) unhealthy eating habits involving the consumption of raw or inadequately cooked shellfish.
3. Inactivated hepatitis A vaccines have become commercially available in recent years in Hong Kong and overseas. These vaccines are highly immunogenic in adults and children. Despite the limited experience with the vaccines, it is speculated that conferred immunity after a completed course of vaccination could last for 10 or more years.
4. With a better understanding of the clinical course and epidemiology of hepatitis A infection, and the availability of an efficacious vaccine, the Scientific Working Group on Viral Hepatitis Prevention (SWG)¹ feels it timely to develop a set of strategies on hepatitis A vaccination for the reference of health care professionals, interested individuals, and members of the public.

Factors Considered

5. A number of factors have been considered in the development of strategies detailed in the document:
 - a) Hepatitis A infection is often asymptomatic in children but symptomatic in adults. If vaccination with a limited protection period is introduced in childhood, this may lead to the loss of immunity and the theoretical risk of symptomatic disease during adulthood.
 - b) Hepatitis A vaccines could only protect one from infection by the hepatitis A virus. Food hygiene is still required to prevent one from contracting all other pathogens transmitted via the consumption of contaminated food.
 - c) Protection may be incomplete until four weeks after hepatitis A vaccination.

¹ Department of Health is responsible for the surveillance, prevention and control of hepatitis A infection in Hong Kong. The Scientific Working Group on Viral Hepatitis Prevention advises the Director of Health on all issues relating to viral hepatitis prevention, while the Advisory Committee on Immunization advises on vaccination strategy.

- d) Recommendations for hepatitis A vaccination in children under the age of two cannot be made yet because of limited scientific data on the subject.
- e) Hong Kong travellers to high endemicity places or travellers from high endemicity places constitute a small fraction of notified hepatitis A infection in Hong Kong. There has not been any rise in the number of individuals infected while travelling in the mainland or another country.
- f) There is no quantitative ascertainment of the role of food handlers infected with hepatitis A in spreading the infection in Hong Kong. So far, outbreaks originating from the same food premises were extremely low. Foodhandlers are not at higher risk of infection, but they may have a theoretical, yet critical, role in common-source transmission.
- g) About 20% of locally produced shellfish samples are tested positive for hepatitis A RNA by screening. The level has remained relatively constant in the past two years.

Principles

- 6. Public education and the maintenance of a high standard of food hygiene are the most important components of the strategy in effecting hepatitis A prevention.
- 7. Hepatitis A vaccination offers protection from the infection on a personal level. Its use in mass vaccination as a means of preventing hepatitis A infection in Hong Kong is not yet justified because of insufficient public health rationale. The strategy needs, however, to be reviewed from time to time in line with international and local developments.
- 8. A targeted approach is desirable in the development of (a) education programmes and (b) vaccination strategy for individual community, in order to achieve hepatitis A prevention.

Specific Recommendations

For members of the public

- 9. The public should be adequately informed of the basics of hepatitis A infection – its routes of transmission, the importance of food and personal hygiene in preventing infection, and the efficacy of vaccination in protecting one from the infection. It must be emphasised that vaccination plays a secondary role in preventing hepatitis A infection, and should not be treated as an alternative to food hygiene.
- 10. The decision to receive hepatitis A vaccination is a personal one, based on the behavioral and exposure risk of each individual. The public shall be informed that there is no public health ground of vaccinating everyone.

11. Public education must be enhanced and sustained in order to prevent the spread of hepatitis A. The strategy should be integrated with that for programmes on the prevention of foodborne diseases and other forms of viral hepatitis.

12. The public shall be alerted to the risk of contracting hepatitis A through consumption of raw or undercooked shellfish. The general advice of taking well-cooked food (100°C for 5 minutes) should be stressed in public education programmes.

For health professionals

13. Medical practitioners should be constantly reminded of the importance of reporting hepatitis A, like other notifiable diseases, to the Department of Health. The data collected are extremely important in formulating relevant public health strategy in the long run.

14. Health professionals are in an ideal position to inform their clients of how hepatitis A can be prevented. They should also advise on the appropriate vaccination strategy for their clients after assessing the behavioural and/or exposure risk of each individual

15. Nosocomial spread of hepatitis A is rare. Provision of hepatitis A vaccination in health care setting is generally not necessary.

For selected target communities

16. Travellers going to highly endemic areas or places of questionable sanitation should be advised to receive hepatitis A vaccination. The following should be optimised: their access to information on the infection, counselling on vaccination, and channels to receive the vaccination at one's own cost.

17. Upon deciding on vaccination, travellers should receive the first vaccine dose at least 4 weeks before departure. Hepatitis A immunoglobulin is indicated if the interval is less than 4 weeks, which should be administered at a different anatomic injection site.

18. Foodhandlers should receive education on maintaining a high standard of food hygiene. Their employers should be advised to consider providing vaccination to the employees to minimise the risk of infection and spreading the infection should one become infected.

19. Some other groups are at higher risk of infection, for example, men who have sex with men, injecting drug users, regular recipients of blood/blood products. Persons with chronic liver diseases are at increased risk for fulminant hepatitis A. Service providers working with these people should assess the risk and advise on hepatitis A prevention and vaccination appropriately.

In cases of outbreaks

20. The Department of Health is responsible for controlling outbreaks if that occurs. In case of a hepatitis A outbreak, the use of immunoglobulin or hepatitis A vaccines should be considered for close personal contacts or common source exposure on a case-by-case basis.

The use of vaccines, immunoglobulin and blood tests

21. Two hepatitis A vaccines preparation are registered and currently available in Hong Kong: HAVRIX[®](SKB) and VAQTA[®](MSD). The recommended dosages are²

HAVRIX[®]

Vaccinee's age	Dose (EL.U)	Volume	No. dose	Schedule
2-18y	720	0.5	2	0, 6-12m
>18	1440	1.0	2	0, 6-12m

VAQTA[®]

Vaccinee's age	Dose (U)	Volume	No. dose	Schedule
2-17y	25	0.5	2	0, 6-18m
>17	50	1.0	2	0, 6-12m

22. If immunoglobulin is indicated to prevent hepatitis A infection in, e.g. travellers, a single dose at 0.02ml/Kg should be given, which gives protection for up to 3 months. For travel periods exceeding 2 months, 0.06ml/Kg should be given instead. A repeat dose is warranted if the period exceeds 5 months.

23. Pre-vaccination blood test for antibody against hepatitis A is generally not required if an individual is aged 30 or below because of a low prevalence of the antibody in this age group. Post-vaccination testing for hepatitis A antibody is not indicated because of the anticipated high rate of response.

² Centers for Disease Control and Prevention. Prevention of hepatitis A through active or passive immunization: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1996;45(No. RR-15).