Hepatitis B Vaccination Programme in Public Services in Hong Kong –protocol update 2001

Background

1. Hepatitis B vaccination was introduced into Hong Kong in 1983. The demonstration of effectiveness in the protection of health care workers and newborns has led to the expansion of the hepatitis B vaccination programme in the public services. This paper summarises the current hepatitis B vaccination provision in public services in Hong Kong.

The Vaccine, Administration and Booster

2. Recombinant vaccines are used in public services[1]. The vaccines are contraindicated in those who have developed a hypersensitive reaction to previous doses. The standard 3-dose regimen at 0,1,6 months is adopted. Half the adult dose is used for those aged 16 or below. The vaccine is injected intramuscularly into the mid-deltoid muscle in adults and adolescents, or anterolateral aspect of thigh for newborns and young children. Booster vaccination is generally not necessary. Post vaccination serological testing is indicated only for health care workers (refer to paragraph 9).

Universal Neonatal Hepatitis B Vaccination

3. All babies in Hong Kong are provided with the 3-dose regimen of hepatitis B vaccination using half the adult dose. While the first dose is administered at birth in hospital, the second and third doses are provided at the Maternal and Child Health Centres of the Department of Health. The second dose is given at one month and the third dose at 6 months after the first.

4. Hepatitis B serology of mothers is routinely obtained during antenatal visits, and an additional hepatitis B immunoglobulin is provided within 24 hours of life for babies born to carrier mothers, concomitantly with the first dose of hepatitis B vaccine but at a different site.

Children with an Incomplete Course of Vaccination

5. Those under the age of 6 who have not completed the three dose regimen could have the schedule completed at the Maternal and Child Health Centres.

6. Upon presentation, the immunization records are assessed. Management in this situation is based on the following principles:

(a) The interval between the first and second doses has to be between 3 weeks to 12 weeks before they are counted as valid. Invalid schedules should be restarted.

(b) The interval between the second and third doses has to be more than 8 weeks. Interruption after the second dose can be completed by administering a third dose at any time after 8 weeks.

Supplementary Hepatitis B Vaccination for Primary Six Students

7. For primary six students, immunization records are checked during an annual supplementary programme at schools[2], and vaccination may be provided on-site when indicated (refer to Children with Incomplete Course of Vaccination). To complete the course, the second and third dose could be provided at the Department of Health Regional Offices or General Outpatient Clinics.

Hepatitis B Vaccination and Post-exposure Prophylaxis for Health Care Workers

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[1] Two brands of recombinant hepatitis B vaccines (B-Hepavac II by MSD and Engerix-B by SKB at adult dose of 10 ug and 20 ug respectively) are currently used in the public services.

[2] Initiated in September 1998. Rationale refer to SWG Discussion Paper: A proposed supplementary hepatitis B vaccination programme for primary six students. 19 June 1998.

8. Health care workers[3] in the public services are offered options to undergo hepatitis B serology determination upon entry to the job and a full-course standard regimen hepatitis B vaccination will be provided when indicated.

9. The determination of anti-HBs after vaccination guides the management of future occupational exposure to hepatitis B. At the Department of Health, anti-HBs level is routinely measured at 1- 4 months after the third dose. An anti-HBs titre of 10mIU/ml or greater is considered an adequate response. Those who have a lower level, indicating a suboptimal response, receive a second full course of vaccination. Those with no detectable anti-HBs after full courses of vaccination are classified as non-responders, while hyporesponders refer to those whose anti-HBs is between 0 to 10 mIU/ml. In practice there is no difference in the management of these two groups regarding post-exposure prophylaxis.

10. The Department of Health currently caters for the hepatitis B vaccination for the government' s health care workers whereas the individual hospital is responsible for its own staff members.

11. In the case of needlestick injuries or mucosal exposure, post-exposure prophylaxis with hepatitis B immunoglobulin and hepatitis B vaccination is indicated when (1) the source patient is a carrier, and (2) the exposed health care worker has never received hepatitis B vaccination or is a non- or hypo-responders. Individual assessment is needed when the status of source patient is unknown. While the initial management after exposure may be taken care of by the attending health care provider, subsequent follow-up of exposed individuals is offered by both the Department of Health and individual institution[4].

Viral Hepatitis Preventive Services
Department of Health Jan 2001

[3] While definition of health care workers varies among international societies, for practical purposes, here the term refers to medical, dental and nursing professionals. Other workers in health care settings shall be assessed by the heads of institutions regarding their job nature and need to be included under this provision.

[4] Refer to SWG recommended guidelines "Preventing Hepatitis B Transmission in Health Care Settings". Revised edition June 1997