



衛生防護中心
Centre for Health Protection

Scientific Committee on Vaccine Preventable Diseases

Recommendations on the Use of Varicella (Chickenpox) Vaccine in Childhood Immunisation Programme

Background

Varicella (chickenpox) is a highly communicable viral disease with fever and itchy skin rash and is caused by varicella-zoster virus (VZV). VZV is spread by air-borne transmission of droplets from the upper respiratory tract or from the vesicle fluid of the skin lesions.

2. Varicella is the most commonly reported notifiable infectious disease in Hong Kong. The number of notifications varied from about 6,700 to about 18,000 from 2000 to 2011. It is more common in winter. Majority of cases occur in children. It is usually a mild childhood disease and complications occur in approximately 1% of all cases with secondary bacterial infection of the skin being the most common. It is more severe and could be fatal in adults and immunocompromised individuals. Most varicella cases recover well. However, VZV remains dormant in the sensory-nerve ganglia and may be reactivated at a later time, causing herpes zoster (shingles).

3. Herpes zoster is a painful vesicular rash with dermatomal distribution resulting from reactivation of VZV. It occurred in about 10-20% of individuals with varicella. Most cases of herpes zoster occur after the age of 50 or in immunocompromised persons.



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Varicella Vaccines

4. Varicella vaccines contain live attenuated virus derived from the Oka strain of VZV. Two types of varicella vaccines, the monovalent varicella vaccines (mVV) and combined measles, mumps, rubella and varicella vaccines (MMRV), are registered in Hong Kong for prevention of varicella infections.

5. Both mVV and MMRV are safe and effective. Studies indicated that the effectiveness of one and two doses mVV in children were 80-85% and 98% against all varicella, whereas MMRV was licensed on the basis of non-inferiority of immunogenicity of the antigenic components compared with Measles-Mumps-Rubella vaccine (MMR) and mVV. Regarding safety, both mVV and MMRV are safe and most individuals do not experience adverse reactions after immunisation. The most commonly reported reactions are local reactions, such as pain, redness and rash at the injection site. Systemic symptoms such as fever and generalised skin rash occur less frequently. However, post-licensure studies suggest that the use of the two MMRV (both ProQuad® and Priorix-Tetra®) among young children results in a higher risk for fever and febrile seizures during the 5-12 days after the first dose compared with the use of MMR and mVV at the same visit. Children aged 4 to 6 years receiving MMRV as second dose did not show increased risk of febrile seizure. Use of mVV has not been associated with increased risk of febrile seizure.

Recommendations

6. In December 2012, the Scientific Committee on Vaccine Preventable Diseases (SCVPD) reviewed updated scientific evidence including local epidemiology, latest economic analysis and recommendations among the international communities, and recommended incorporation of varicella vaccines into the Childhood Immunisation Programme (CIP).

7. The recommended vaccination schedule consists of a 2-dose varicella-containing vaccines. To fit into the existing CIP schedule, the SCVPD recommended the first dose of varicella-containing vaccines at 12 months of age and a second dose when these children reach primary 1.

8. Since mVV and MMRV are both effective, either MMR and mVV or MMRV may be used for the two doses. However, in view of the increased risk of febrile seizures following the first dose MMRV vaccination in young children, providers who are considering administering MMRV to children aged below 48 months should discuss the benefits and risks of both vaccination options with the parents or caregivers.

9. The SCVPD suggested continue monitoring the disease burden of varicella and related complications, as well as herpes zoster, to assess the

impact of universal varicella vaccination.

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