

BCG Vaccination for Children

TB may not be of concern in Australia or NZ but Dr Kwan Yew Seng advises vaccinating your children, here's why.

Human tuberculosis (TB) has existed for thousands of years and no country is TB-free. It's the most common infection in the world. An estimated one third of humanity (approximately two billion people) is infected with TB without any symptoms and five to 10 per cent of these will develop the disease in their lifetime. There are nearly three million new TB cases per year in South East Asia. In 1993, WHO declared TB a global health emergency, reflecting the magnitude of the concern about the disease. It is estimated that between 2000 and 2020, nearly one billion people will be newly infected, 200 million will get sick and 35 million will die from TB – if control measures are not significantly improved. Childhood deaths from TB are usually caused by meningitis or disseminated disease.

DISEASE

TB is caused by a bacterium called *Mycobacterium*. The symptoms and signs of TB vary significantly with the age and immune status of the patient and with the stage of the disease. Pulmonary (lung) disease is the commonest, but any organ can be affected. Transmission is through inhalation of infected respiratory droplets produced by coughing and sneezing, resulting in the lungs being the primary organs to be infected. The infection may then spread to other parts of the body. In young children this spread may result in severe disease, including miliary TB (involving the whole lung) and TB meningitis (involving the lining of the brain), which are conditions with high mortality rates.

TB IN SINGAPORE

TB was a leading cause of death in the first half of the century here in Singapore. With improved socio-economic conditions and established TB control measures that include BCG vaccination, the incidence rate of TB has declined greatly, from 307 per 100,000 population in 1960 to 35.1 per 100,000 population in 2008. However this figure is still 5–10 times that of developed countries, e.g. Australia's incidence rate is <4 per 100,000 population.

BCG VACCINE

BCG vaccination is one of the strategies in our national TB Control Programme. Since 1957, BCG vaccination has been given to all newborns. Although it does not help much to prevent the common form of pulmonary TB, it has been proven to be highly effective in preventing the serious forms of childhood TB, namely TB meningitis and disseminated TB. Therefore the vaccine remains a very important component of the national TB Control Programme. The vaccine is given intradermally in the left upper arm area. A small red swelling appears one to three weeks after vaccination. This may later discharge and a scab forms. The site should be kept clean and dry and exposed to air if possible. Antiseptics or creams should not be used. Normally the vaccination site heals leaving a small, depressed scar over a three to four month period.

RECOMMENDATION

BCG vaccination is recommended for neonates and children whose families have relocated to Singapore. The reason for this is the relatively high incidence rate of the disease here and the

proven effectiveness of the vaccine in preventing the serious and potentially fatal forms of the disease. For children above six months old, a tuberculin skin test is done first. If there is no reaction after 48–72 hours, the BCG vaccine can be safely given. The vaccine is not given when the child has a fever, when the child has had a previous live vaccination (e.g. MMR and chicken pox vaccines) within the past four weeks or if there is active dermatitis over the area of the injection.

Complete Healthcare International (CHI) at body with soul, 45 Rochester Park. Call 6776 2288 or log on to www.chi-health.com.sg.



Above: Dr Kwan Yew Seng (far left) and the team at CHI.

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