CESSATION OF THE BCG (BACILLE CALMETTE GUERIN) REVACCINATION PROGRAMME FOR PRIMARY SCHOOL CHILDREN IN HONG KONG

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Introduction

BCG is one of the most widely used vaccines. Some countries give BCG vaccination at birth and a repeat dose when the children reach primary school years if they show a negative reaction on tuberculin skin testing (TT). Some countries only vaccinate infants at birth while others do not give BCG vaccination regularly. The different practices of BCG vaccination largely relate to the epidemiology of tuberculosis in different localities.

BCG vaccination was first introduced in Hong Kong in 1952. Direct BCG vaccination has been offered to all newborn babies. The coverage has reached 99% since 1980. Primary school children are given BCG revaccination if they show a negative reaction on TT. During the recent years, about 80% of them have had a negative tuberculin reaction and are revaccinated.

World Health Organization (WHO) Recommendations

In August 1995, the WHO issued a statement on BCG vaccination with the following recommendations[1]:

- In countries where the prevalence and incidence of tuberculosis are high, BCG vaccination should be given to infants as soon after birth as possible, and in any case, within the first year of life.
- Where TT is used to make decisions on BCG revaccination, the practice should be discontinued.
- For persons who have received BCG vaccination, repeat vaccination is not recommended, as scientific evidence does not support this practice. Multiple revaccinations are not indicated in any persons.

In view of the recommendations of the WHO, the Advisory Committee on Immunization (ACI) had then advised to research on the efficacy of the local BCG revaccination programme and to collect information on the practice of BCG revaccination of other countries with

different tuberculosis endemicity.

Evaluation of the Local BCG Revaccination Programme

A retrospective cohort study was conducted to assess the efficacy of the local BCG revaccination programme for primary school children.[2]

The subjects of the study were a cohort of 303 692 children who had been given BCG vaccination at birth between 1 July 1978 and 30 June 1982. They were offered TT and BCG revaccination if TT was negative when they were in primary school at the age of six to nine years between 1984 and 1991. This cohort was followed up through the notification registry for five to nine years until 31 July 1998 for the development of active tuberculosis. To assess the efficacy of this revaccination programme, the relative risk of developing tuberculosis between participants and non-participants was calculated. It was found that the relative risk for developing tuberculosis was 1.28 for non-participants with a 95% confidence interval of 0.92 to 1.77 (i.e. no statistically significant association was demonstrated).

Furthermore, it has been shown in another local study that BCG revaccination was associated with a 5% risk of developing ulcers or pustules at the vaccination site requiring some weeks to heal[3].

Recommendations of the ACI

The BCG revaccination programme was discussed again by the ACI in its meeting held in May 2000. The current practice of BCG revaccination of countries of various tuberculosis endemicity was also reviewred (Table 1)[4]. Having studied all the available scientific evidence, the Committee has made the following recommendations concerning the local BCG vaccination programme:

- The BCG vaccination programme for newborn babies should be continued.
- For children under 15 years old and never given BCG vaccination before, direct BCG vaccination is recommended and prior tuberculin test is not required.
- There is no evidence for the efficacy of BCG revaccination. Hence, for persons who have received BCG vaccination previously, repeat vaccination is not recommended.

Way Ahead

Taking on board the recommendations of the ACI, the local BCG revaccination programme for primary school children will be discontinued from the school year 2000/01 onwards. Backup mechanisms are being put in place to provide BCG vaccination for those children who have not been previously immunized with BCG. As the local tuberculosis incidence is still high, vigilant control of tuberculosis needs to be maintained through sustained effort in a wide spectrum of measures like surveillance, health education, directly observed treatment, defaulter and contact tracing. The fight against tuberculosis is a long battle and requires a collaborative effort from all of us.

Table 1 Summary of BCG Revaccination Programme in Some Areas[4]

BCG Revaccination Programe	Country / Area
Not practised even before the WHO' s statement issued in 1995	Thailand, Sri-Lanka
Stopped after the WHO' s statement issued in 1995	Beijing*, Shanghai*, Guangdong*, Taiwan*, the Philippines, Republic of Korea*
Under review	Singapore, Japan
Programme being continued	Malaysia
Primary vaccination practised on a limited scale, while revaccination not being practised	Australia, United Kingdom, United States

*Verbal communication

References

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