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# Evaluation of bcg vaccination in infants and pre school children in kalyobia

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Despite modern advances in diagnostic techniques and effectiveness of treatments, Mycobacterium tuberculosis remains one of the pathogens causing the greatest amount of chronic diseases and death throughout the world. Also advances in the diagnosis and treatment of tuberculosis in children have lagged behind those in adults owing to diminished familiarity with the disease and difficulty in performing clinical studies in children (Starke 1988). BCG is the method which can provide without any difficulties reliable protection against tuberculous infection through creation of a long lasting immunity in the vaccinated individual. BCG vaccination has an appreciable effect in preventing childhood tuberculosis. BCG vaccination soon after birth may not only protect against the acute manifestations of childhood tuberculosis but also, in the long run, contribute significantly to the elimination of tuberculosis. By this study we aim to evaluate the efficiency of BCG vaccine and this study was carried out in rural areas of Kalyobia Governorate on 500 infants and preschool children with age from 3 months to 5 years. All of them were chosen to be BCG vaccinated, not suffering, convalescing from any disease or taking any drug that could affect the degree of tuberculin test reaction. Tuberculin testing was carried out using PPD of 2U by Mantoux technique. The test was read after 48-72 hours and indurations of 5 mm or more were considered positive. Subjects with +ve tuberculin were examined by posteroanterior chest X-ray. - 314 individuals who were negative to PPD 2U were further re-evaluated by PPD 10U. The obtained results showed that the collective percentage of tuberculin positivity in the first 5 years of life using PPD 2U was 37.25 and increased to 70.6% after re-evaluation by PPD 10U. Also the positivity of tuberculin significantly decreases as age increases with no significant difference due to sex. There is direct relation between the size of BCG scar and the positivity of tuberculin but with no relation between the age and the size of BCG scar. The results of chest X-rays examination showed no abnormalities suggestive of M. tuberculosis affection. This confirms the preventive value of the BCG vaccination. From the previous results we can conclude that the allergy obtained by vaccination with the Egyptian vaccine is satisfactory, keeping in mind that those children received the vaccine in different rural welfare centers routinely without taking strict precautions against light and heat. Follow up of vaccinated children by yearly tuberculin testing (10U) is advisable to determine the efficacy of the vaccine, the duration of immunity and the optimal time for revaccination. Tuberculin testing should be performed 3 days before

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vaccination, repeated 3 months after vaccination, then repeated yearly. This should be performed by Mantoux testing using 10 U of PPD