

BCG Scar Survey in Karachi Schools

Pages with reference to book, From 17 To 17

Salimuddin Aziz, Tariq Lodi, S. Ejaz Alam (PMRC Research Centre, Jinnah Postgraduate Medical Centre, Karachi.)

Introduction

Scar surveys at regular intervals are a measure of BCG coverage in a population. BCG has been the main stay of tuberculosis control in Pakistan since 1952. To 1977 mobile teams were disbanded and responsibility for BCG was given to rural health centers and tehsil hospitals. Recently BCG vaccination has been integrated with extended programme of immunization (EPI)¹. According to 1974-78 survey BCG scar was seen in only 94%² of children between the ages of 0-14, while in Sindh it was only 4.9%. This was a poor result, confirming very low BCG coverage. The present study was planned to see the beneficial effect, if any, of BCG in making it apart of EPI programme by conducting a scar survey in Karachi school population.

Subjects, Methods and Results

A cross section of primary and secondary schools of Karachi both in upper and lower socio-economic areas were selected and all students of the selected schools were examined for BCG scars. A total of 6214 students (2016 males and 4198 females) were examined. Male to female ratio was 1:2 and the average age was 10 years with a range of 5-19 years. Scars were seen in 2025 (33%) while 4189 (67%) had no scars. Amongst 2025 patients with scar, 769 (38%) were males and 1256 (62%) females (Table I).

Table I. Scars survey in Karachi school.

	BCG scars +ve (n = 2025)	BCG scars -ve (n = 4189)	Total (n = 6214)
Male	769 (38%)	1247 (30%)	2016 (32%)
Female	1256 (62%)	2942 (70%)	4198 (68%)

The percentage coverage was fairly constant in different age groups Table II

Table II. Age distribution in scars positive and negative.

Age group	Positive (n = 2025)	Negative (n = 4189)	Total (n = 6214)
5-9	368 (37%)	621 (63%)	989 (16%)
10-14	1294 (32%)	2812 (68%)	4106 (66%)
15-19	363 (32%)	756 (68%)	1119 (18%)

which ranged from 32% amongst 10-19 years to 37% amongst 5-9 years.

Comments

The 1974-78 national tuberculosis prevalence survey showed BCG scar in 9.7% of the Pakistani population and for Sindh province the figures were half that of national figures, being only 4.9%¹. Though break-up for urban and rural population is not available, one would presume that percentage for urban areas would be higher. Situation seems to have improved some what but coverage still remains very low. Karachi being the most developed city of the province with better medical facilities showed that only 33% had scar; the figure would be even lower for the rural areas. The percentage of those who actually develop immunity would be even lower when other factors like break-down in the cold chain and faulty technique are taken into consideration. For BCG to have any epidemiological effect the coverage of BCG will have to be at least 80% or more.

References

1. Kalota. 3. and Chaudhry, NA. Epidemiological situation of tuberculosis in Pakistan: results of national tuberculosis prevalence survey. Rober Kocas Centenary Sarinoiz, JPMC., Karachi, 1982, pp. 1-11.
2. Report on tubercylosis survey in Karachi, Rawalpindi and L.ahore division of West Pskistan. Directorate of tuberculosis control, Government of Pakistan, October, 1962.