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Let Sabin Guide Polio Eradication in India

The miraculous effect of pulse polio immunization in eradicating poliovirus has been successfully applied to eliminate polio from many countries. Cuba and Slovakia in early 1960s and China in 1995 eradicated poliovirus with just 2-4 rounds(1,2).

In India the goal remained elusive especially in Uttar Pradesh and Bihar even after a decade of mass immunization despite tens of rounds of immunization. The critical requirement for mass immunization to eradicate polio is administering oral polio vaccine to all children simultaneously within the shortest time possible so that the intestines of most children will resist infection and spread of wild poliovirus.

Because of poor community support due to well-known reasons, coverage during pulse polio immunization in these states was inadequate. In the quest to immunize all children, the duration of pulse polio rounds were extended to almost two weeks to enable health workers to visit and revisit all households. The staggering of immunization enabled the virus to find non-resistant intestinal tracts to continue transmission and nullify the effect of mass immunization. The poor sanitary conditions and high virus load prevailing in these areas facilitated transmission. Though immunizing most if not all children during pulse polio is important, it is crucial that immunization be completed within the shortest period. The objective is to establish temporary dominance over the naturally occurring polioviruses and other interfering enteric viruses.

Sabin has the following to state in the conduct of mass immunization to eradicate polio: "The special point about the annual mass vaccinations with OPV for all children younger than three, four or five years of age-which have proven highly successful in Cuba (for the past 20 years), in Brazil (during the past three years), and recently also in Mexico is that all the children are usually vaccinated within one or two days, which quickly breaks the chain of transmission of the virulent viruses, and the annual campaigns create and maintain the maximum number of children with resistant intestinal tracts"(3).

It appears polio can be eradicated from India by a simple change in strategy in the conduct of mass immunization as suggested by the great scientist and visionary Albert Bruce Sabin.

Paul T Francis,
Associate Professor,
Community Medicine,
Amrita Institute of Medical Sciences,
Cochin 682 026, Kerala.
E-mail: paultfrancis@gmail.com

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