

Report of Dengue Vaccine Field Trial in the Caribbean, 1963 : A Collaborative Study *

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The onset of an epidemic of dengue fever in Puerto Rico in mid-1963 offered an opportunity to evaluate an attenuated, living, type 1 dengue vaccine in the face of spreading disease caused by a heterologous (not type 1) dengue virus, precise identity undetermined. Vaccine (50-1000 suckling-mouse intracerebral LD₅₀) or placebo was given subcutaneously by jet injector to alternate adolescent male secondary school students and some adult male civil employees in four municipios on the eastern end of the island, where the epidemic seemed to be extending. Altogether 561 subjects received the vaccine and 552 subjects served as controls. An elaborate follow-up system was organized by which diseases occurring in the two groups were classified on clinical grounds as (a) dengue, (b) possible dengue or (c) other, according to strict criteria. Prior to vaccination a random 20% sample of the subjects was bled; at the termination of the

study, approximately 85% of the subjects were bled. Analysis of the results revealed the following salient points:

1. No adverse reaction to the vaccine was detected.
2. The number of cases of clinical dengue per week among the controls remained almost constant during the first 15 weeks after vaccination.
3. The number of new cases of dengue per week among the vaccinated subjects declined rapidly during the first three weeks after vaccination and then levelled off to a rate one-third to one-half of that of the control group. If cases recorded during the first three weeks after vaccination are excluded, the vaccinated group experienced an over-all case rate of clinical dengue of 39% of that of the control group.

Thus, the type 1 attenuated living vaccine afforded significant partial protection against dengue fever produced by a different (not type 1) or heterologous type of dengue virus. The protection developed within three weeks after vaccination and persisted at least 85 days.

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The WHO System of Arthropod-borne Virus Reference Centres *

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As a basic step in the development of the WHO Arthropod-borne Virus Programme a two-tier system of international and regional reference centres has been established.

The International Reference Centre serves as a focus for technical information and advice for

regional and field laboratories. It acts as the final court of appeal for the identification, recognition and characterization of new or aberrant strains of viruses. These strains are received from the regional reference centres, which should have studied them as far as they can before sending them to the International Reference Centre. The Department of Epidemiology and Public Health, Yale University School of Medicine, 310 Cedar Street, New Haven 11, Connecticut, USA, under Dr Wilbur G. Downs

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