ABSTRACT

Analysis of Risk Factors in Cholera Infected Baris

by

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As part of the overall field trial of cholera toxoid fifty-four toxoid field trial baris from which cholera cases came to the hospital in Matlab were visited by a field team which conducted prospective studies for ten days. The field team confirmed the census in the bari, and drew a scale map outlining domiciles, latrines, and sources for domestic water. Children were weighed and measured on the first day, and a finger-stick sample of blood was collected from each individual for anti-toxin and vibriocidal titrations. Over the next ten days each individual who was present answered questions about sources of water for domestic use, history of diarrhoea in the previous 24 hours, and submitted a rectal swab which was cultured for vibrio Choderae using enrichment techniques only. At the conclusion of the study, each individual was identified by vaccine group, and census socio-economic data for the family was noted.

Analysis of these data are incomplete. However, preliminary analysis demonstrates that 13% of inhabitants of cholera infected baris were shown to develop either asymptomatic infections or diarrhoea with cholera positive rectal swabs. No significant differences were noted between attack rates for placebo-immunized and toxoid-immunized volunteers. Interestingly, the distance between the home of a bari member and the home of index case was inversely related to the attack rate.

We intend to analyze the data using multivariate techniques to identify the independent contribution of host factors (nutritional status, age, and antibody titer) and environmental factors (water-use patterns and distance from residents of an index case) to the overall risk of acquiring cholera in a cholera infected area.

PROCEEDINGS OF THE 9TH MEETING OF THE SCIENTIFIC REVIEW AND TECHNICAL ADVISORY COMMITTEE OF THE CHOLERA RESEARCH LABORATORY

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and

REPORTS OF THE COLLABORATIVE STUDIES BETWEEN CENTER FOR MEDICAL RESEARCH AND CHOLERA RESEARCH LABORATORY

For the

YEAR 1974

Dacca, Bangladesh