

A SEROLOGICAL SURVEY FOR CHOLERA ANTIBODIES IN THE CHOLERA VACCINE FIELD TRIAL POPULATIONS IN RURAL EAST PAKISTAN.

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The Pakistan-SEATO Cholera Research Laboratory has conducted two controlled cholera vaccine field trials in rural East Pakistan beginning in 1963, using a commercially prepared whole cell cholera vaccine, a purified Ogawa Antigen, and typhoid or tetanus toxoid controls. Intensive surveillance for cholera in the 39,328 individuals in the trials established the efficacy of the cholera vaccine in reducing the case rate as compared to the controls, while demonstrating that the purified Ogawa antigen had only minimal effect. In 1965, a random sample serological survey was carried out in these vaccinated and control populations. Specimens were collected from 1522 persons and titered for vibriocidal and agglutinating antibodies utilizing the microtiter technique developed in this laboratory. Analysis of the results revealed that in the control populations in this endemic area, there was a marked increase in antibody titer with increasing age. A comparison of the populations that received the whole cell cholera vaccines with their corresponding controls revealed that in all age groups the immunized population had significantly higher titers. This was evident even in the population that received a single injection of cholera vaccine 2 years prior to the survey. The titers of the population that received the purified Ogawa antigen, however, were not significantly different from the controls except in the oldest age group (over 30 years). In examining the cholera experience, it was found that in the control population, there was a fall in the case rate with age that correlated inversely with the rise in antibody titer with age. In addition, in the populations receiving the cholera vaccines, the reduction in case rates as compared to the controls also correlated with the rise in titer produced by the vaccines.

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