

ANTIBIOTIC THERAPY OF CHOLERA

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A clinical trial of four antibiotics, Tetracycline, Chloromycetin, Streptomycin and Paramomycin as an adjunct to intravenous fluid and electrolyte replacement in the treatment of cholera has been conducted at the Pakistan-SEATO Cholera Research Laboratory on 364 proven cholera cases admitted during 1964-1965 Fall-winter epidemic.

Tetracycline and chloramphenicol proved highly effective in adults. Duration of diarrhea in patients receiving these two antibiotics was roughly half that of the group receiving no antimicrobial therapy. There were few bacteriological relapses and no clinical relapses. Total stool volume and intravenous fluid requirements were markedly reduced. Duration of bacteriologic positivity was also about half that of the untreated group. Paramomycin appeared to have minimal therapeutic effectiveness. Streptomycin was moderately effective clinically and bacteriologically.

In children weighing less than 15 kg., the results were similar, with the exception of chloramphenicol which did not prove as effective as tetracycline. Only moderate success, similar to streptomycin, was obtained in the chloramphenicol palmitate treated children.

Analysis of specific tetracycline regimens employed reveals certain interesting trends. Increasing the dose of tetracycline did not appear to increase its therapeutic effectiveness. Duration of therapy appears to be more important, contrary to reports of Carpenter and associates. Therapeutic failures were seen in patients treated with tetracycline for only 48 hours, regardless of dosage. There was a higher incidence of therapeutic failure as well as of bacteriologic relapses in those cases treated for 48 hours even though they received a higher total dose of drug.

An attempt was made to simplify the tetracycline treatment schedule for use in epidemic situations. Two experimental regimens were tested. In one, four large doses of tetracycline (4 Gm. in adults and 2 Gm in children) were given

over the first 24 hours; no further antibiotics were given. There were four therapeutic failures in the first seven patients treated in this manner. A second regimen in which the total 24 hour dose of tetracycline (1 gm in adult and 500 gms in children) was given once daily for 4 days was tried on 21 patients. There were two therapeutic failures. It would appear that the time honoured six hourly administration of tetracycline over several days will achieve more consistent results than these "crash" programs.

A relatively high incidence of bacteriologic relapses (4-23%) was noted even in the six-hourly regimen given for 72 hours in all antibiotic groups. It is still unknown whether more prolonged therapy for 5 to 7 days will reduce or eliminate bacteriological recurrences. In such relapsed cases, vibrios from stool cultures taken on admission and late in the course of patients illness were tested for quantitative in vitro sensitivity to the antibiotics employed. Resistance to the organism did not develop. A reduction in stool volume was apparent within a few hours of the administration of tetracycline. Statistically significant differences were observed within 13 to 21 hours.

PRESENT TREND OF BIRTHS AND DEATHS IN RURAL EAST PAKISTAN

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Census was obtained in September, 1964 covering a population of about twenty thousand rural people under Matlab police station of Comilla district in East Pakistan. Population figures of 1961 are shown compared against the figures collected by the present authors in 1964. During the census done in 1964 for each family a census sheet was completed after a family to family inquiry. Every such census sheet included information regarding the name, age, sex of each member of the family. After six months of the completion of census work done in September, 1964 information was obtained regarding birth and death covering a six-month period from the same above mentioned population group. From this population group information regarding birth and death are being collected on a daily inquiry basis. This paper will include charts related to birth and death extending the period of study till the presentation of this paper.

Besides the presentation of variety of trends in births and deaths this paper will give hint to certain patterns in the births and deaths which are prevalent in rural East Pakistan.

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