age of 10 years. Cholera had a marked seasonal pattern, rising from 1 cases during August, to 155 cases in December, then falling to 2 cases in May, The acute diarrhea cases had a distinctly defferent seasonal pattern with a sharp peak in March and April. The majority of these acute diarrhea cases could be distinguished from Cholera only by bacteriological examinations.

The cholera cases came from all areas of Dacca City and the adjacent thanas. 45% of the cholera admissions came in clusters from localized neighborhood or small community outbreaks. These small epidemics were often associated with high cases rates for the community involved, and with multiple cases within the same family. In a number of instances, the water sources shared by the families, or the coummity were shown to contaminated with **V. Cholera.**

Only 5% of the family contacts of a Cholera cases subsequantly developed cholera, Bacteriological studies, however, revealed that infaction with **V. Cholera,** with or without mild diarrhea, could be demonstrated in at least 21% of the family members. It is suggested that these mild or inapparent infections in man serve as the primary reservoir of cholera, and that water plays only a passive role as a vehicle in disseminating infection.

To be read by Wiley H. Mosley, M. D. Chief, Epidemiology Section.

Pattern of diarrhoeal diseases in East Pakistan

DR. MD. FAHIMUDDIN

A study of diarrhoeal diseases is reported from the records of hospital attendance and field survellance in the Cholera Veccine field Trial Area in Matlab Thana of Comilla district.

THE TREATMENT OF CHOLERA, 1965.
The Method of the Pakistan SEATO Cholera Research Laboratory.

DRS. J O. TAYLOR, A K.M. JAMIUL ALAM.
MRS. K.M. ALLY, MRS R. AKB R,
A. FIROZE, N. HIRSCHORN,
Z. HOQUE, Y. IMAM,
M R. ISL M, J LINDENBAUM,
A. MOJID, M. RAHMAN,
AND D. SACHAR.

While cholera Continues to take its annual toll of lives in East Pakistan a method of treatment is avilable which is both simple and almost comletely effec-

tive in saving cholera patients. With this method, at the Pakistan-SEATO Cholera Research Laboratory, there have been only five deaths out of 537 proved cases of cholera treated there during the past year.

The most important feature of the therapy of cholera is the adequate volume for volume replacement of the fluids and electrolytes lost in the cholera stool. It is essential to place the patient on a bed or cot with a hole near the buttocks for collection and measurement of the volume of stool output so that the same volume may be replaced intravenously. This very inexpensive 'cholera cot', If introduced in hospitals and dispensaries in Pakistan, would save hundreds or thousands of lives yearly, even if only saline were used.

It has been found that the stools of cholera patients contain sodium in amounts approximatly isotonic to plasma (15 mEq/liter potassiam and 45 mEq/liter bicarbonate). A solution containng 5 grams sodium chloride, 4 grams sodium bicarboate, and 1ngram potassium chloride is ideal for replacing cholera stool. Thus a patient coming in pulseless with cholera is given this solution (called 5:4:1 by our staff) rapidly intravenously until the pulse is full and slow and the patient appears clinically to be rehydrated. Then further stool losses are replaced with equal volumes of 5:4:1 solution as long as the patient continues to purge. Antibiotics such as tetracycline and chloramphenicol can shorten the duration of diarrhoea and bacteriologic positivity and thus save fluids and shorten the length of medical treatment ; they cannot save the life of severe cholera patient by themselves and thus must be an adjunct to proper fluid therapy. Complications of cholera such as acidosis, acute renal failure, hypokalemia, tetany and hypoglycemia and their treatment will be briefly reviewed.

Antibiotic therapy of cholera

JOHN LINDENBAUM, M. D.
M. RAFIQUL ISLAM, M. B. B. S.
R. AKBAR, M. B. B, S.
and
N. HIRSCHHORN, M. D.

While measurement of stool output and adequat intravenous fluid and electrolyte replacement remain the corenerstone of cholera therapy. antibiotics should also given to eradicate the vibrios and thereby shorten the duration of diarrhoea and diminish total stool volume. The results of controlled trials of antibiotics orally adminstered to 364 patients during the 1964-'65 Dacca cholera epidemic will be presented. All patients were treated with intravenous fluids. There was a single death in this series. Duration of diarrhoea and bacteriologic positivity as well as

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