

RECENT DEVELOPMENTS IN THE PATHOPHYSIOLOGY OF CHOLERA

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Many of the recent studies have focused on the affects of the severe metabolic acidosis associated with cholera. It has been demonstrated that the blood volume is shifted from the peripheral to the central circulation. Thus the correction of the fluid deficit without correction of the acidosis in cholera may lead to complications such as pulmonary edema.

Other studies have further elucidated the mechanisms by which cholera stool is produced. Intestinal flux studies in cholera patients have indicated a defect in both the secretory and absorptive function of the gut. This has been confirmed in both dogs and rabbits. Recent studies in dogs have shown that increased blood flow has no effect on cholera stool production.

INTRAVENOUS THERAPY OF CHOLERA

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The object of this paper is to review the advantages and disadvantages of various intravenous solutions commercially available in the market as replacement solution in the treatment of cholera.

1. Normal saline alone—Severe acidosis may occur as a complication of normal saline infusion alone.

2. Normal saline and 2% sodium bicarbonate—It is quite adequate if used in 2 : 1 ratio but bicarbonate has got the following disadvantages :

- (i) It can be autoclaved only with great difficulty and therefore must be added to a solution just prior to use to avoid bacterial contamination and
- (ii) Commercially available bicarbonate has a short shelf life.
- (iii) Pediatric cases requiring less than 3 liters may never receive the bicarbonate and thus develop acidosis.

3. Dacca solution or 5/4/1 (5 gm. of NaCl, 4 gm. of NaHCO_3 and 1 gm. of KCL in a liter of distilled water)—This is an isotonic solution and found to be quite satisfactory in the treatment of both adults and children. But the disadvantage of bicarbonate already stated prevents its commercial use.

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SOUVENIR

NOVEMBER
1968

10th All Pakistan Medical Conference

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A416s
1968