

DIARRHOEAS AT KANTI HOSPITAL

Report on 100 cases:

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Introduction:

The period under study was from 24/3/1972 to 27/7/1972 i.e. a period of just over four months and the patients were those admitted under the two of us at Kanti Hospital. It must be stated at the very outset that the figures are rather small considering the fact that this period under study is the time when most of the gastroenteritis cases come to the hospital. Furthermore the fact that 50% of the Nepali population is under the age of 16 years would have led us to expect a much larger number of gastroenteritis case to be admitted during this period. The reasons for this are that the 50 bedded Kanti Hospital generally did not admit diarrhoea cases as a matter of policy, those who managed to get in were the exceptions rather than the regulars. By this we mean that most of the really severe ones went on their own initiative to the Infectious Diseases Unit at Teku. Of the severe ones who did get to this hospital, it was generally the case that; because they came from outside the valley with limited funds, they could not be admitted in the paying beds of the hospital and hence were referred on to the Infectious Diseases Unit. It was therefore the really severe ones who were virtually gasping, and who might die on the way to I. D. U. that were kept at Kanti Hospital.

Sex Incidence

Of the total series, 70 cases were males and 30 females. One can only explain this on the supposition that parents in this country at least are more worried about their male-offspring than female ones. The other way of looking at it, though extremely unlikely would be due to the fact that women, being of hardier constitution from the time of birth, withstand diarrhoeas better.

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Age Incidence

Of the 100 cases—70 were under the age of 1 year. There was none over the age of 10 although we do admit cases up to 16 years in this hospital.

Under 1 year	70
1 to 4 years	24
Over 4 to 10	6

Classification of Cases

The cases were classified at time of admission as mild, moderate or severe on the basis of clinical findings viz:—

	Mild	Moderate	Severe
G/C	Sleeping	Restless	Limp & Quiet
Thirst	Thirsty	<u>Extreme</u> Absent	Not Apparent
Mouth	Dry	Very Dry	Lips cyanosed
Skin	Warm	Warm	Cold
Turgor	Normal	<u>Diminished</u>	Diminished
Eyes	Bright	Sunken	<u>Sunken</u> Rolled up
Fountanelle	Normal	Sunken	Sunken
Muscle Tone	Normal	<u>Increased</u> Twitching	Flaccid
Loss Bd. Wt.	Less than 5 p.c.	5-10 p.c.	10-15 p.c.

On the basis of this classification there were 25 mild, 60 moderate and 15 severe cases.

Treatment

We tried to standardise treatment by giving Chlormphenicol (Nemycin) and Furazolidone (Furoxone) to most of the children except the very small ones who were given Neomycin with Pectin Suspension (Kaltin). The subcutaneous fluid given was 1/4 or 1/2 strength Normal Saline, whereas that I.V. fluid given was 5% Glucose with 1/4, 1/2 or Normal strength saline, the very small ones received the 1/4 strength.

It will be seen from our figures that only 3 intraperitoneal fluid administrations were done in the whole series. These were in fact done in cases whose general condition was rather poor. The intraperitoneal fluid given was 50ml/Kg body weight and the solution used was 1/2 strength normal saline. Fluids were administered through a No. 18 needle, inserted in mid-

line below the umbilicus, and a routine intravenous giving set was used. We did however encourage oral electrolyte solutions at the same time or as soon as the patient accepted it.

The composition of the oral electrolyte solution was as follows:

Na+ 92 meq/litre

K+ 20 meq/litre

Cl- 82 meq/litre

HCO₃- 30 meq/litre

Glucose— 116 mmol/litre.

Parental fluid therapy given to a total of 57 out of 100 cases was as follows:

Intraperitoneal

—3 CASES

Intravenous 1)—via needle puncture

—7 cases

2)—via cut—down using polythene tubing

—5 cases

Sub—cutaneous fluid was given to a total of 42 cases. Of this however 4 cases had to be given repeat therapy. Fluid was given to these cases with a certain amount of trepidation for one was afraid of causing abscess formation or an indurated mass at the site of saline infusion. The reason for the high subcutaneous rate was because most of our cases were under one year and the concept of giving intraperitoneal fluid with proper aseptic technique has yet to be established. At the same time the giving of I. V. fluid is not technically feasible due to lack of scalp vein infusion sets.

Nevertheless it can be seen from these figures that 46 cases were managed on oral therapy alone. All of our 100 cases however received oral electrolyte solution at some stage, for we give oral electrolytes only after the child has passed urine. Oral fluid prior to this state is just simple glucose solution.

Result

Cured... 68.

Improved at time of discharge on request by patient... 11.

L. A. M. A. (Left against medical advice)... 6.

Expired... 15.

The cases which left against medical advice are usually of a very low general condition and probably died at home. This brings the total number of cases which expired to 21%. Of the 21 that died 15 were under the age of one.

Discussion and Summary

Our figures of 21% mortality in our unit at Kanti Hospital is very high. Until such time

as we give more I. V. fluid—mainly by scalp vein infusions, as 70% of the cases are under 1 year, we cannot hope to better our figures. The giving of subcutaneous fluid should be abandoned and in its stead fluid should be given either I. V. or Intraperitoneally.

Our attempts at intraperitoneal fluid administration is still in its infancy but we consider it to be far cheaper, easier, time-saving and more suited to our needs of catering for large numbers.

In this study we have tried to lay stress on the oral replacement of fluid in diarrhoea cases, as this is in fact the cheapest method for the developing countries—countries whose funds are limited and where the state has to provide treatment for huge numbers of patients. For our inpatients viz. the ones in this series, the solution used contained the following ions (as milliequivalents per litre of water) $\text{Na}^+ 92$, $\text{K}^+ 20$, $\text{Cl}^- 82$, $\text{HCO}_3^- 30$ and glucose (116 mmo l/litre).

Attempts are being made to supply the powder form of electrolytes to the outpatients at the hospital. They themselves have to add the glucose powder and dissolve the whole in 500 ml of water. At the same time some chemists are being encouraged to market their electrolyte powder packets for sale to the public.

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