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# EFFECT OF SEASON ON THE EXTENT OF HYPERNATRAEMIA IN PATIENTS WITH GASTROENTERITIS

# **THESIS**

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" بسم الله الرحمن الرحيم "

"قالوا سبحانك لا علم ثنا الا ما علمتنا انك أنت العليم الحكيم "

" صدق الله العظيم "

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#### LIST OF ABBREVIATIONS

A.T.P. : Adenosine triphosphate.

A.D.H. : Antidiuretic hormone.

HCO3 : Bicarbonate.

BL. Pr. : Blood pressure.

Ca++ : Calcium.

C.N.S. : Central nervous system.

C.S.F. : Cerebrospinal fluid.

C1 : Chloride.

c-AMP : cyclic-Adenosine monophosphate.

c-GMP : cyclic-Guanidine monophosphate.

E.C.G. : Electrocardiograph.

EPEC : Enteropathogenic E-coli.

ETEC : Enterotoxogenic E-coli.

E-coli : Escherichia coli.

e.g. : Example.

E.C.F. : Extracellular fluid.

F : Female.

G.E. : Gastroenteritis.

G.I.T. : Gastrointestinal tract.

IgA : Immunoglobulin - A.

I.C.F. : Intracellular fluid.

: Less than.

Mg++ : Magnesium.

M : Male.

 $\overline{X}$ : Mean.

Mns. : Months.

> : More than.

NCDDP : National control of diarrheal disease project.

N<sub>2</sub> : Nitrogen.

No. / n : Number / Number of cases.

O.R.S. : Oral Rehydran Solution.

 $P0_4^{--}$ : Posphate.

K<sup>+</sup> : Potassium.

P.E.M. : Protein energy malnutrition.

Na<sup>+</sup> : Sodium.

S.D. : Standard deviation.

V.Cholera: Vibrio cholera.

 $H_20$ : Water.

W.H.O. : World health organisation.

Yrs. : Years.

# INTRODUCTION AND AIM OF THE WORK

#### INTRODUCTION

Diarrheal diseases represent a major cause of morbidity and mortality among children of developing countries (Feachem and Koblinsky, 1983).

Developing countries suffer from a syndrome of G.R.M.

- G. Stands for gastroenteritis.
- R. Stands for respiratory tract infection.
- M. Stands for malnutrition.

In these countries childhood mortality due to diarrhea is more than mortality due to any other disease (Hirschhorn, 1980). Morbidity from diarrheal diseases in developing countries exceeds greatly that is seen in the developed countries. The observed difference is due to environmental, socio-economic and cultural differences (Dupton and Pickering, 1980).

In Egypt gastroenteritis is responsible for 52% of fatalities occuring during the first year of life, and 38% of preschool children deaths (Kamel, 1983). Dehydration is the most important fatal complication of acute diarrhea (Saberi and Assaee, 1983).

With the introduction of oral rehydran solution "0.R.S." the infant mortality rate came down from 100/1000 in 1980 to 50/1000 in 1985 (NCDDP, 1985).

Electrolyte disturbance may cause "Brain damage and permanent post-hyperelectrolytemic Sequelae". It will be of interest to study hypernatraemia with the changes in weather and the effect of oral rehydration on this electrolyte changes.

#### AIM OF THE WORK

Is to determine the prevalence of hypernatraemia among children with gastroenteritis and the effect of environmental temperature on the prevalence and clinical manifestations of hypernatraemia.

# REVIEW OF LITERATURE