

A Study of Intestinal Motility in Experimental Uremia and Effect of Erythropoietin

THESIS

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Presented by

Einas Mohamed Nagib
(M.B.B.Ch - Ain Shams University)

Supervised by

Prof. Dr. Magda Hassanein Metwally Youssef
Professor of Physiology
Faculty of Medicine, Ain Shams University

Dr. Mona Ahmed Ahmed
Assistant Professor of Physiology
Faculty of Medicine, Ain Shams University

Dr. Mohamed Hassan El-Sayed
Lecturer of Physiology
Faculty of Medicine, Ain Shams University

Physiology Department
Faculty of Medicine, Ain Shams University
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قال تعالى :

بسم الله الرحمن الرحيم

{ وَقُلْ اَعْمَلُوا فَسَيَرَى اللَّهُ
عَمَلَكُمْ وَرَسُولُهُ وَالْمُؤْمِنُونَ }

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My mother and my son

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their patience and understanding,
and for their love.*

CONTENTS

	<i>PAGE</i>
LIST OF ABBREVIATIONS	<i>II</i>
LIST OF TABLES	<i>III</i>
LIST OF FIGURES	<i>VI</i>
INTRODUCTION	<i>1</i>
AIM OF THE WORK	<i>2</i>
REVIEW OF LITERATURE	<i>3</i>
MATERIALS AND METHODS	<i>17</i>
RESULTS	<i>35</i>
DISCUSSION	<i>68</i>
SUMMARY AND CONCLUSION	<i>76</i>
REFERENCES	<i>79</i>
ARABIC SUMMARY	

LIST OF ABBREVIATIONS

ARF	Acute renal failure
ATP	Adenosine Triphosphate
CRF	Chronic renal failure
eNOS	Endothelial nitric oxide synthase
EPO	Erythropoietin
GFR	Glomerular filtration rate
GSH	Glutathione
NO	Nitric oxide
SOD	Superoxide dismutase
TNF	Tumor necrosis factor

LIST OF TABLES

No.	Title	Page
1	Plasma creatinine and plasma urea levels in control group.	40
2	Plasma creatinine and plasma urea levels in gentamicin-treated group.	41
3	Plasma creatinine and plasma urea levels in erythropoietin-gentamicin-treated group.	42
4	Red blood cell parameters, total leucocytic count and platelet count in control group.	43
5	Red blood cell parameters, total leucocytic count and platelet count in gentamicin-treated group.	44
6	Red blood cell parameters, total leucocytic count and platelet count in erythropoietin-gentamicin-treated group.	45
7	Duodenal motility parameters in control group.	46
8	Duodenal motility parameters in gentamicin-treated group.	47
9	Duodenal motility parameters in erythropoietin-gentamicin-treated group.	48

10	Descending colon motility parameters in control group.	50
11	Descending colon motility parameters in gentamicin-treated group.	51
12	Descending colon motility parameters of erythropoietin-gentamicin treated group.	52
13	Response of duodenum and descending colon to acetylcholine administration in the control group.	54
14	Response of duodenum and descending colon to acetylcholine administration in the gentamicin-treated group.	55
15	Response of duodenum and descending colon to acetylcholine administration in the erythropoietin-gentamicin-treated group.	56
16	Plasma creatinine and plasma urea levels in the studied groups.	57
17	Red blood cells parameters and total leucocytic count and platelet count in the studied groups.	58
18	Duodenal motility parameters in the studied groups.	59

19	Descending colon motility parameters in the studied groups.	60
20	Response of duodenum and descending colon to acetylcholine administration in the studied groups.	61

LIST OF FIGURES

No.	Figures	Page
1	Calibration curve recorded at sensitivity 0.1	23
2	Tracing of duodenal motility before and after addition of acetylcholine in studied groups	49
3	Tracing of descending colon motility before and after addition of acetylcholine in studied groups	53
4	Graphs showing plasma creatinine and plasma urea levels in the studied groups.	62
5	Graphs showing duodenal motility parameters in the studied groups.	63
6	Graphs showing descending colon motility parameters in the studied groups.	64
7	Graphs showing correlations between plasma creatinine and descending colon frequency and average duration of contraction in the studied groups.	65
8	Graphs showing correlations between plasma creatinine and descending colon average forces of contraction before and after administration of acetylcholine in the studied groups.	66
9	Graph showing correlation between plasma creatinine and duodenal absolute force of contraction after acetylcholine administration in the studied groups.	67

Introduction

INTRODUCTION

Although gastrointestinal complications are common in patients with renal disease, studies demonstrating the effects of renal dysfunction on bowel motility are conflicting. Diarrhea and constipation are reported in patients with end-stage renal disease (*Etemad, 1998*).

Disturbed small intestinal motility might explain diarrhea in some patients with chronic renal failure (*Strid et al., 2003*). Conversely, colonic transit was found to be prolonged in long-term hemodialysis patients (*Wu et al., 2004*).

Though there is large number of available literatures on gastrointestinal dysfunction in chronic renal failure; little studies are devoted to the disturbed intestinal function in acute uremia and the underlying mechanisms are poorly understood.

Erythropoietin (EPO) is used in the therapy of patients with renal failure suffering from anemia (*Cody et al., 2001; Nemoto et al., 2001*). It was shown to reduce the degree of diarrhea and the degree of colonic injury in mice with experimental colitis (*Cuzzocrea et al., 2004*).

It was, therefore, of interest, to study the patterns of altered intestinal motility in acute renal failure and to investigate the possible effect of erythropoietin on these changes.

Aim of Work

AIM OF WORK

This study was performed to investigate the intestinal motility changes in experimental acute renal failure induced by gentamicin. Also the possible protective effect of pretreatment with erythropoietin was studied.