Glucose Homeostasis In Non Diabetic Egyptians With Chronic Renal Failure

Thesis

Submitted for partial fulfillment of The Master Degree (M.Sc.) in

Endocrine and Metabolism

By

Manal Nassef Seleim

Supervised by

****

Prof. Dr. Mohamed Amin Fikry

Prof. of Internal Medicine and Endocrinology

Prof. Dr. Moghazi Ali Mahgoub

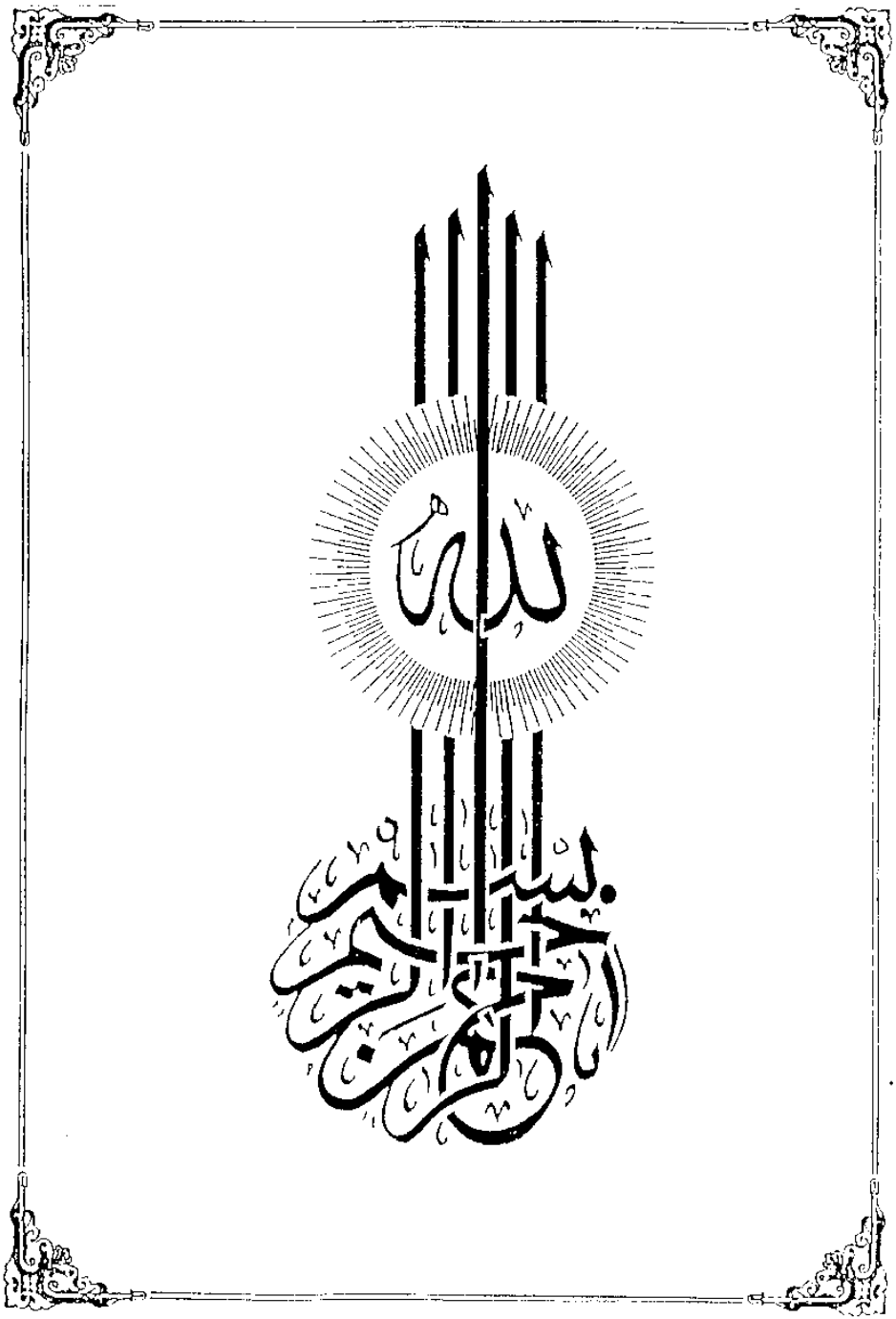
Prof. of Internal Medicine and Endocrinology

Prof. Dr. Sabry Gohar

Prof. of Internal Medicine and Nephrology

Faculty of Medicine - Ain-Shams University

(1996)



بسم الله الرحمن الرحيم

وفوق كل ذي علم عليم

صدق الله العظيم

Acknowledgment

First of All,

Thanks GOD who allowed and helped me to accomplish this work

I would like to express my deepest thanks and grateful appreciation to **Prof. Dr. Mohamed Amin Fikry**, *Professor of Internal Medicine and Endocrinology, Ain Shams University, to whom I owe more than words can express. His limitless help, valuable advise and kind encouragement are beyond acknowledgment.*

I owe special gratefulness and much regards to **Prof. Dr. Moghazi Ali Mahgoub**, *Professor of Internal Medicine and Endocrinology, Ain Shams University for his helpful and close experienced supervision. His encouragement, guidance and valuable advise were behind the accomplishment of this work.*

I am greatly indebted to **Prof. Dr. Sabry Gohar**, *Professor of Internal Medicine and Nephrology, Ain Shams University, for his valuable guidance and suggestions.*

I would like to display my very indebtedness to **Prof. Dr. Fadilla Gad-Alla**, *Professor of Internal Medicine and Endocrinology, Ain Shams University for her constructive supervision and her help in achieving this work. I received a great deal of help from her, that words cannot express.*

Manal Nassef Seleim

Table of Contents

Introduction and Aim of work

Glucose Homeostasis In Non Diabetic Egyptians With Chronic Renal Failure

Introduction :-

Most patients with chronic renal failure (CRF) have abnormal or moderately increased insulin concentration in serum under fasting conditions, the changes of insulin concentration in response to hyperglycemia have been reported as normal ***(Briggs et al., 1967)***, blunted ***(Hamoers et al., 1966)*** or increased ***(Bilbrey et al., 1974).*** The early response to sudden hyperglycemia is probably excessive ***(Bilbrey et al., 1974).*** The rate of decline is slower than normal.

It has been claimed that the brisk early rise of insulin/glucose ratio in response to glucose loads could differentiate uremic glucose intolerance from that of adult onset diabetes mellitus in 70% of instances ***(Horten et al., 1986).***

Most patients with untreated uremia are unable to metabolize an administered load of glucose at normal rate. The decline of blood glucose to normal is delayed in those patients who seldom demonstrate fasting hyperglycemia or ketosis.

Most patients with CRF display glucose intolerance, which is referred to as "uremic pseudodiabetes". It is noticed that uremic pseudodiabetes reflects an important

metabolic defect of uremia that may have implications such as insulin resistance, disordered protein synthesis, and accelerated atherosclerosis.

There were several causes of glucose intolerance, including starvation, potassium depletion, excessive secretion of growth hormone ***(Freeman and Samaan, 1967)*** as well as defective insulin due to secretion of larger percentage of pro-insulin and accumulated metabolic end-products ***(Briggs et al., 1967)***.

Aim of the Work :-

The aim of this work is to study some of the possible factors responsible for this state of uremic pseudodiabetes, and the homeostatic mechanisms regulating plasma glucose level in non diabetic Egyptians with CRF, before and after hemodialysis.

Review of Literature