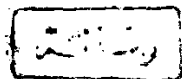


PERIOPERATIVE MANAGEMENT OF INTRACRANIAL ANEURYSMS



**Essay Submitted for Partial Fulfillment
of the Master Degree in Anesthesiology**

BY

Sahar Mohammed Kamal Mahmoud, M.B.B.Ch.

617.967481
S M

Supervised BY

Prof. Dr. Salah El-Din Moustafa El-Halaby

*Professor of Anesthesiology and Intensive Care Medicine
Faculty of Medicine - Ain Shams University*

Prof. Dr. Aly Mohammed Ahmed Moussa

*Assistant Professor of Anesthesiology and Intensive Care Medicine
Faculty of Medicine - Ain Shams University*

Dr. Nabil Wasfi Bebawy

*Lecturer of Anesthesiology and Intensive Care Medicine
Faculty of Medicine - Ain Shams University*

**Faculty of Medicine,
Ain Shams University**

***** 1996 *****

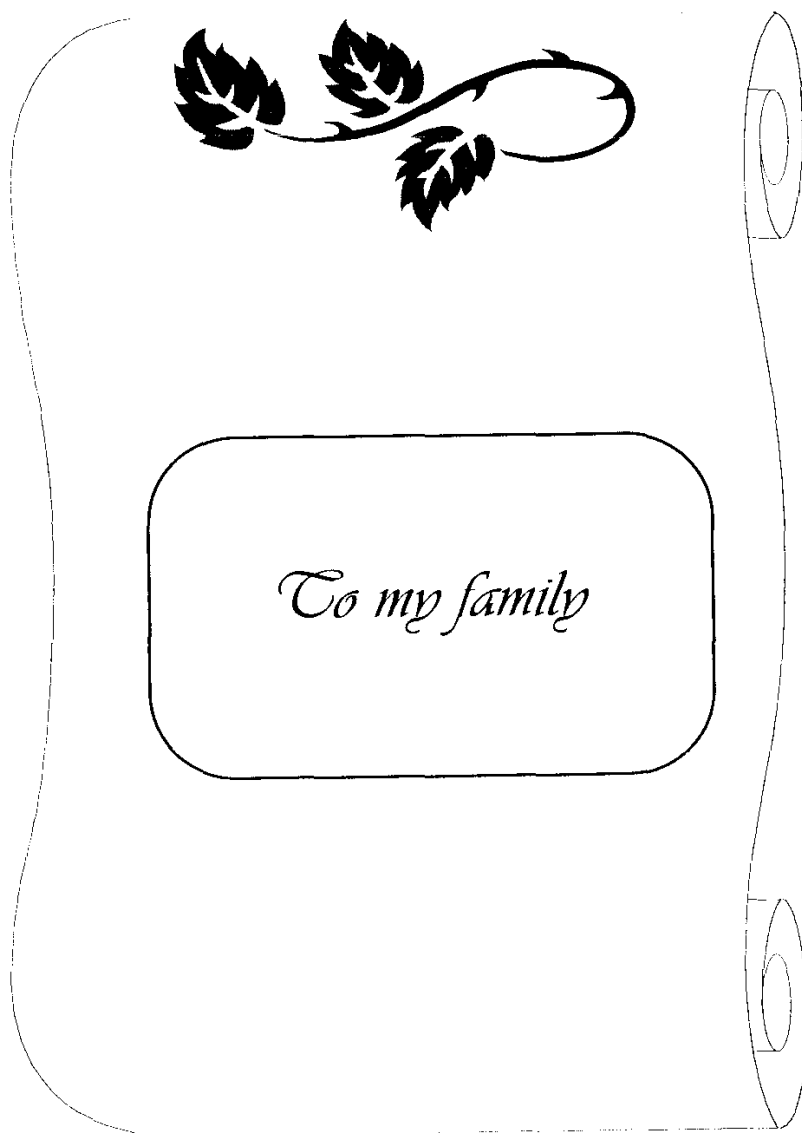




بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا سبحانك لا علم لنا إلا
ما علمتنا إنك أنت العليم
الحكيم

﴿سورة البقرة - الآية ٣٢﴾



Acknowledgment

I would like to express my deepest thanks and most sincere gratitude to *Prof. Dr. Salah El-Din El-Halaby*, Professor of Anesthesiology and Intensive Care, Faculty of Medicine, Ain Shams University, for his generous advice, continuous encouragement and guidance.

I also wish to express my heartily thanks and indebtedness to *Prof. Dr. Aly Moussa*, Assistant Professor of Anesthesiology and Intensive Care, Faculty of Medicine, Ain Shams University, for his kind help, meticulous supervision, and indispensable direction.

My sincere thanks and appreciation to *Dr. Nabil Wasfi*, Lecturer of Anesthesiology and Intensive Care, Faculty of Medicine, Ain Shams University, for his close help, assistance and direction throughout the whole period of this work.

Sahar Mohammed Kamal

List of Contents

	PAGE
Introduction	1
Chapter (1) : Anatomy	2 - 7
Chapter (2) : Physiological Considerations	8 - 18
Chapter (3) : Pathophysiology of Cerebral Aneurysms	19 - 34
Chapter (4) : Perioperative Anesthetic Management of Intracranial Aneurysm	35 - 64
Summary	65 - 66
References	67 - 80
Arabic Summary	

List of Tables

No.	Table	Page
Table 1 :	Normal cerebral physiologic values.	9
Table 2 :	Effects of anesthetics on rates of CSF secretion and reabsorption.	17
Table 3 :	Intracranial aneurysm distribution by site.	21
Table 4 :	Location of verified aneurysm rupture site.	22
Table 5 :	Signs of intracranial hypertension.	33
Table 6 :	Effects of anesthetic drugs and techniques on blood pressure, intracranial pressure and cerebral perfusion pressure.	34
Table 7 :	Glasgow coma score	41

List of Figures

No.	Figure	Page
Figure (1) :	A diagram of the arteries at the base of the brain, showing the constitution of the arterial circle.	4
Figure (2) :	Changes in CBF caused by independent alterations in PaCO_2 , PaO_2 and blood pressure.	13
Figure (3) :	Pathophysiology of uncontrolled intracranial hypertension.	32

Introduction

