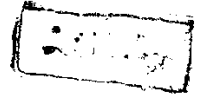


PEDIATRIC NEUROSURGICAL ANESTHESIA

Essay Submitted for Partial Fulfillment
of the Master Degree in Anesthesia



BY

617.167481
Z. A

Zeinab Ahmed El-Saify

5/11/96

M.B.B.Ch., Faculty of Medicine, Ain Shams University

Supervised BY

Prof. Dr. Yehia Abdel Rahim Hamimy

*Prof. of Anesthesia and Intensive Care
Faculty of Medicine - Ain Shams University*



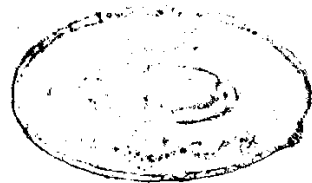
Dr. Fikri Fouad Ahmed El-Bokl

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

Dr. Sherif Ahmed Elewa

*Lecturer of Anesthesia and Intensive Care
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

First, thanks are all to *God* for blessing me this work until it reached its end, as a little part of his generous help throughout life.

I would like to express my sincere appreciation and deep gratitude to *Prof. Dr. Yehia Abdel Rahim Hamimy*, Professor of Anesthesia and Intensive Care, Faculty of Medicine, Ain Shams University, for his kind moral support and continuous encouragement; really, it is a great honor to work under his guidance and supervision.

It gives me a great pleasure to express my deep gratitude to *Dr. Fikri Fouad Ahmed El-Bokh*, Assistant Professor of Anesthesia and Intensive Care, Faculty of Medicine, Ain Shams University, for his kind advice, valuable supervision and his great efforts throughout this work.

My deepest appreciation and grateful thanks are due to *Dr. Sherif Ahmed Elewa*, Lecturer of Anesthesia and Intensive Care, Faculty of Medicine, Ain Shams University, for his great support, patience, and the tremendous effort he has done in the meticulous revision of the whole work.

No words can describe how deeply indebted I am to *Dr. Ahmed Metwali Khattab*, Assistant Lecturer of Anesthesia, Faculty of Medicine, Ain Shams University, for the great efforts he made during the accomplishment of this work.

Zeinab El-Saify



To my family

List of Contents

	PAGE
Introduction	1
Chapter (1) : Embryological and Physiological Aspects	2 - 46
Chapter (2) : Anesthetic Management and Fluid Therapy	47 - 102
Chapter (3) : Postoperative Care and Complications	103 - 113
Summary	114 - 117
References	118 - 141
Arabic Summary	1 - 3

List of Figures

No.	Figure	Page
Figure (1) :	Early stages in early development of brain and cranial nerves.	4
Figure (2) :	A median section of the head showing supratentorial and posterior fossa structures.	6
Figure (3) :	The position of the inferior end of the spinal cord in relation to the vertebral column and meninges at various stages of development.	7
Figure (4) :	Circle of Willis and principal arteries of the brain.	9
Figure (5) :	The venous drainage of the brain.	9
Figure (6) :	Blood supply to the spinal cord.	16
Figure (7) :	Pressure-volume compliance curve.	20
Figure (8) :	Intubating position for a baby with severe hydrocephalus.	89
Figure (9) :	Decision algorithm for the management of venous air embolism during a craniotomy in the sitting position.	101

List of Tables

No.	Table	Page
Table (1) :	Phases and stages of neural development during gestation.	3
Table (2) :	Signs and symptoms of intracranial hypertension.	25
Table (3) :	Age, weight, and vital signs.	65
Table (4) :	Fasting (NPO) guidelines for children and adults.	70
Table (5) :	Size and length of endotracheal tube according to age and weight.	76

