Ain Shams University
Institute of Post-Graduate Childhood Studies
Medical Department

NEONATAL SEPSIS AND LONG-TERM DEVELOPMENTAL SEQUELAE

THESIS

Submitted for Fulfilment of
Ph.D. Degree in Medical Childhood Studies.

By

Fatma Ahmed El-Said Shaaban
M.B., B.Ch.; M.Sc. (Pediatrics)

Supervised by

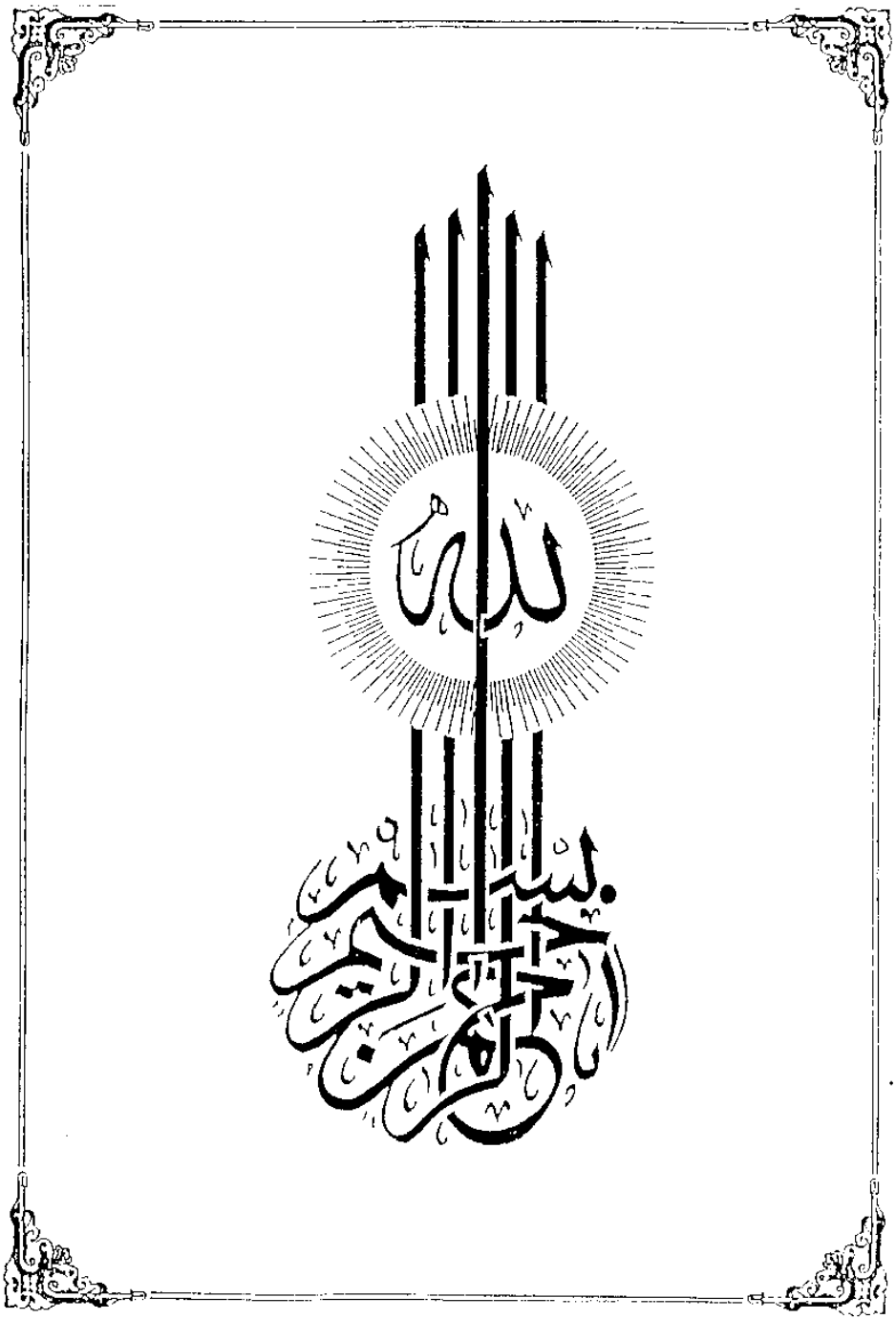
Prof. Dr. Iman Abdel Salam Seoud
Prof. Of Paediatrics
Faculty Of Medicine
Cairo University

Prof. Dr. Samia Abdel-Razzak Hemeda
Head Of Department Of Community Medicine Researches
National Research Center

Dr. Azza Mohamed Orabi
Assistant Professor
Paediatrics
Faculty Of Medicine
Cairo University

Dr. Sanaa Abdel-Rahman Mahmoud
Assistant Prof. Of Paediatrics
Faculty Of Medicine
Ain Shams University

1997



ABSTRACT

Fatma Ahmed El-Said Shaaban

"Neonatal Sepsis and Long Term Developmental Sequelae".

Ain Shams University, Institute of Post-Graduate Childhood Studies, Medical Department.

The aim of the study was to evaluate growth and development in septicemic newborn infants at one year of age. The study was carried out at the follow up clinic of the Neonatal Intensive Care Unit (NICU) of Kasr El-Einy Hospital. It included 100, one year old infant with history of NICU admission because of sepsis and a group of 50 age matched normal control infants. For these infants full clinical examination as well as developmental assessment using Denver Developmental Screening Test (DDST), and hearing assessment using evoked response audiometry were done. There was significant affection of all parameters of growth as compared to controls. A delay in the different sectors of development was found in (20%) of cases, 4 out of them were complicated by meningitis (20%) and 2 cases were complicated by hip arthritis (10%). neurological manifestations were found in 14% of cases in addition to hearing affection. IN CONCLUSION neonatal sepsis does affect infants growth and development as well as hearing as measured by evoked response audiometry. Early detection is advised to benefit from the available stimulating programs.

Key words: Newborn, infant, sepsis, septicemia, growth, development, sequelae, audiometry, hearing.

CONTENTS

LIST OF TABLES

Page

REVIEW OF LITERATURE

RESULTS

LIST OF FIGURES

REVIEW OF LITERATURE

RESULTS

LIST OF ABBREVIATIONS

%	Percent
α1-AT	Alpha-1-Antitrypsin
ABR	Auditory Brainstem Response
AEP	Auditory Evoked Potential
AIDS	Acquired Immuno Deficiency Disease
ANC	Absolute Neutrophil Count
B	B-cell
BAEP	Brainstem Auditory Evoked Potential
BFU-E	Burst Forming Unit-Erythroid
C-D	Clusters of Differentiation
CFU	Colony Forming Unit
CI	Confidence Interval
CMV	Cytomegalovirus
CONS	Coagulase Negative Staphylococci
CP	Cerebral Palsy
CRP	C-Reactive protein
CS	Caesarean section
CSF	Cerebro Spinal Fluid
DDST	Denver Developmental Screening Test
DIC	Disseminated Intravascular Coagulation
DNA	Deoxyribonucleic Acid
DTH	Delayed Type Hypersensitivity
E	Erythrocytes
Eα1PI	Elastase α1 Proteinase Inhibitor
Eo	Eosinophils
ESR	Erythrocyte Sedimentation Rate

FMA	Fine motor adaptive
G	Granulocytes
G6PD	Glucose-6 Phosphate Dehydrogenase
GBS	Group B Streptococci
GM	Gross motor
GVHD	Graft Versus Host Disease
HAP	Height by age percentile
HC	Head circumference
HIV	Human Immunodeficiency Virus
HP	Serum Haptaglobin
HS	Highly significant
HSV	Herpes Simplex Virus
HTLV	Human T-cell Lymphotropic Virus
I/T	Ratio between Immature to Total WBC
Ig	Immunoglobulin
IL-1	Interleukin-1
INFγ	Interferon γ
INT-V difference	Difference between waves V on the Rt and Lt sides.
IPI	Interpeak Interval
IRDS	Idiopathic respiratory distress syndrome
IUFGR	Intrauterine fetal growth retardation.
IUGR	Intrauterine Growth Retardation
IVIG	Intravenous Immunoglobulin
LANG	Language
LP	Lumbar Puncture
Lt	Left
M	Macrophages
Mϕ	Macrophages
m-ESR	micro-Erythrocyte Sedimentation Rate
MR	Mental retardation
NICU	Neonatal Intensive Care Unit
NK	Natural Killer Cells