

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 Sto

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ABSTRACT

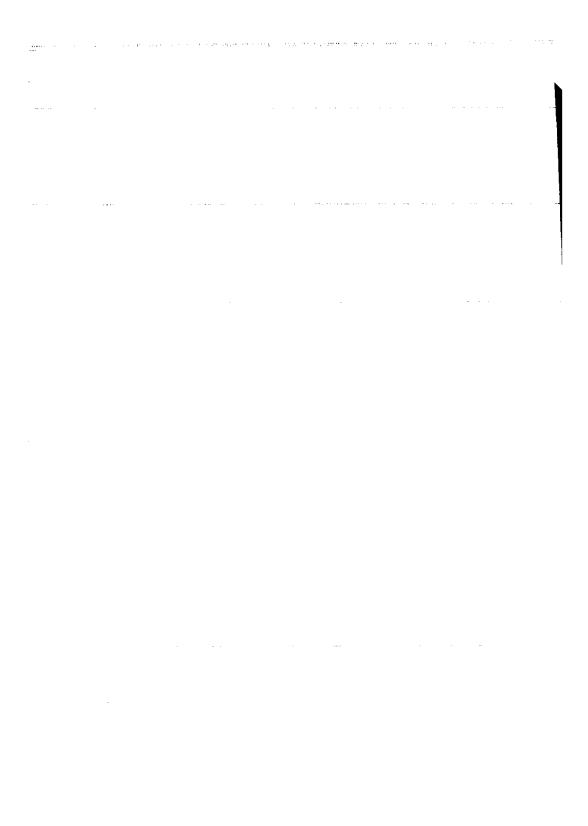
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"Neonatal Sepsis and Long Term Developmental Sequelae".

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.



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LIST OF ABBREVIATIONS

o.o 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

Eα P7 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 IgImmunoglobulin IL-1..... Interleukin-1 INFy..... Interferon y 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