



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Ain Shams University Information Network
جامعة عين شمس

شبكة المعلومات الجامعية

@ ASUNET



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of
15-25- c and relative humidity 20-40%

بعض الوثائق الأصلية تالفة



بالرسالة صفحات نم ترد بالاصل

***Adrenomedullin As A Marker
In Neonatal Sepsis***

B 5627

Thesis

Submitted for the Partial Fulfillment of Master Degree in
Pediatrics

د. ناهد نابل رياء

By

Dr. Nahed Nabil Riad

M.B.; B.Ch

Supervised by

Professor Dr. Ismail Sadek Ismail

Professor of Pediatrics
Faculty of Medicine
Ain Shams University

د. اسماعيل سادة اسماعيل

د. كريم يحيى علي شاهين

Dr. Safaa Shafik Imam
Lecturer of Pediatrics
Faculty of Medicine
Ain Shams University

Dr. Karim Yehia Ali Shaheen
Lecturer of Clinical pathology
Faculty of Medicine
Ain Shams University

2002

ACKNOWLEDGMENT

Thanks to GOD for all the countless gifts I have been offered. Of these gifts, those people who were assigned to give me a precious hand as to be able to fulfill this thesis.

I would like to present my deepest thanks and gratitude to **Prof. Dr. Ismail Sadek Ismail**, Professor of Pediatrics, Faculty of Medicine, Ain Shams University, for giving me the privilege to work under his supervision.

Also, I am gratefully indebted to **Dr. Safaa Shafik Imam** Lecturer of Pediatrics, Faculty of Medicine, Ain Shams University for all her patience she showed during performance of this Thesis.

Much credit goes to **Dr. Karim Yehia Ali Shaheen** Lecturer of Clinical Pathology, Faculty of Medicine, Ain Shams University for his valuable help.

I would like to appreciate my deepest gratitude to all my family for their support and help.

Finally, I would like to thanks all my colleagues and staff for their support.

List of Abbreviations

Adrenomedullin	-----ADM.
Adrenocorticotrophic hormone	-----ACTH.
Acute physiology and chronic health evaluation	-----APACHE.
Blood brain barrier	-----BBB.
Complement	-----C.
Compleat blood count	-----CBC.
Cerebro-spinal fluid	-----CSF.
C-reactive protein	-----CRP.
Central nervous system	-----C.N.S.
Cacitonin-gene related peptide	-----C-GRP.
Cyclic 3', 5' adenosine mono-phosphate	-----cAMP.
Disseminated intravascular coagulopathy	-----DIC.
Endothelial cells	-----ECs.
Erythrocyte sedimentation rate	-----ESR.
Elastase alpha-1 proteinase inhibitors	-----E α -IPE.
Gram positive	-----Gm -ve.
Gram negative	-----Gm +ve.
Group B streptococci	-----GBS.
Gastrointestinal tract	-----GIT.
Haemophilus influenzae	-----H-influenzae.
Heart rate characteristic	-----HRC.
Interleukin	-----IL.
Immunoglobulin	-----Ig.

List of abbreviations

Intravenous-----	IV.
Inerleukin-1 receptor antagonist-----	IL-1Ra.
Intercellular adhesion molecule-1-----	ICAM-1.
Immature / mature-----	I / M.
Immature / total-----	I / T.
Lipopolysaccharide-----	LPS.
Low birth weight-----	LBW.
Molecular weight-----	Mr.
Muli-organ failure-----	MOF.
Natural killer-----	NK.
Nitric oxide-----	NO.
Nitric oxide synthase-----	NOS.
Necrotizing enterocolitis-----	NEC.
Nosocomial bacterial infection-----	NBI.
Neutrophil activating factore-----	NAF.
Neonatal intensive care unit-----	NICU.
Non-insulin dependent diabetes mellitus-----	NIDDM.
Prostaglandin-----	PG.
Pentoxifyllin-----	PTX.
Protein kinase-A-----	PKA.
Platelet activating factor-----	PAF.
Polymerase chain reaction-----	PCR.
Polymorph nuclear leucocyte-----	PNL.
Premature rupture of membrane-----	PROM.
Pro-adrenomedullin N-terminal 20 peptide-----	PAMP.

List of Abbreviations

Radio immuno assay	-----	RIA.
Respiratory distress syndrome	-----	RDS.
Soluble interleukin 2 receptor	-----	sIL2R.
Systemic inflammatory response syndrome	-----	SIRS.
Total leucocytic count	-----	TLC.
Total neutrophilic count	-----	TNC.
Tumour necrosis factor-alpha	-----	TNF- α .
Trifluoroacetic acid	-----	TFA.
Urinary tract infection	-----	UTI.
Very low birth weight	-----	VLBW.
Vascular smooth muscle cells	-----	VSMCs.
White blood cells	-----	WBCs.

List of tables

<i>Table</i>	<i>P</i>
(1)Risk factors for neonatal sepsis.-----	7.
(2)Characteristics of early and late onset neonatal sepsis-----	10.
(3)Common predominant pathogens in early and late onset sepsis-----	11.
(4)Different host defense mechanisms predominantly employed in response to extracellular and intracellular micro-organisms.---	13.
(5)Signs of sepsis in neonates.-----	16.
(6)Sepsis score; examination of the clinical and hematological symptoms in neonatal sepsis.-----	20-21.
(7)Seven points hematological scoring system. -----	26.
(8)Adrenomedullin in diseases.-----	44-45.
(9)The clinical characteristics of the study newborns regarding sex, mode of delivery and body weight-----	67.
(10)Risk factors and clinical evidences of neonatal sepsis-----	68.
(11)Laboratory criteria of the two groups-----	69.
(12)Comparison between the two groups as regards TNF- α and Adrenomedullin-----	70.
(13)Comparison between the patients and control groups as regards other laboratory parameters-----	72.
(14)Effects of maturity of the patients (group I) on the TNF- α and adrenomedullin levels-----	73.

(16) Comparison between survivors and non-survivors of neonatal septic group as regards plasma TNF- α and adrenomedullin-----75.

(17) Relation of the laboratory parameters of neonatal sepsis to the outcome-----77.

(18) The relation between various clinical aspects and the level of TNF- α and adrenomedullin-----78.

(19) One way ANOVA test to see the relation between hematologic score and various clinical and laboratory aspects----79.

(20) Correlation between TNF- α level in neonatal septic group, and multiple parameters-----80.

(21) Correlation between adrenomedullin level in neonatal septic group and other parameters-----81.

Figure	P
(1)Immune and non-immune mechanisms interacting in response to infection-----	14.
(2)Adrenomedullin level in patient group in comparison to control group-----	72.
(3)TNF- α level in patient group in comparison to control group--	72.
(4)Adrenomedullin level in survivors and non-survivors in comparison to control group-----	76.
(5)TNF- α level in survivors and non-survivors in comparison to Control group-----	76.
(6)Correlation between adrenomedullin and TNF- α levels-----	82.
(7)Correlation between I / M ratio and adrenomedullin level-----	83.
(8)Correlation between I / M ratio and TNF- α level-----	83.
(9)Correlation between I / T ratio and adrenomedullin level-----	84.
(10)Correlation between I / T ratio and TNF- α level-----	84.
(11)Correlation between sepsis score and adrenomedullin level--	85.
(12)Correlation between sepsis score and TNF- α level-----	85.
(13)Correlation between hematological score and adrenomedullin level-----	86.
(14)Correlation between hematological score and TNF- α level--	86.