

List of Tables

<i>Tables</i>	<i>Page</i>
 <i>Tables of review</i>	
Table (I): Prediction of RDS through Lecithin/sphingomyelin ratio	16
Table (II): Clinical scoring of respiratory distress syndrome(RDS).....	21
Table (III): According to x-ray RDS is divided into 4 grades	23
Table (IV): Differential diagnosis of neonatal respiratory distress	25
Table (V): Prognosis and outcomes in patients with hyaline membrane disease based on birth weight	31
Table (VI): Classification of lipids.....	33
Table (VII): Composition of lipoprotein	41
Table (VIII): General roles of lipoproteins	42
Table (IX): Plasma triglyceride, cholesterol and lipoproteins. In 553 selected women at 36 wk gestation	48

Tables of results

Table (1): Comparison between group A and group B as regarding some clinical data of preterm Infants	76
Table (2): Comparison between group A and group B regarding some clinical data of mothers	77
Table (3): Comparison between group B and group C as regarding clinical data of mothers	78
Table (4): Comparison between group A and group B regarding cord serum lipid profile (mg/dl)	79
Table (5): Comparison between group A and group B regarding Mothers lipid profile (mg/dl)	80
Table (6): Comparison between group B and group C regarding cord serum lipid profile (mg/dl)	83
Table (7): Comparison between group B and group C regarding mother's lipid profile (mg/dl)	84
Table (8): Correlations between lipid profile of mothers and preterm infants in group A	85
Table (9): Correlations between lipid profile of mothers and preterm infants in group B	88

Table (10): Correlation between maternal weight gain during pregnancy and cord serum lipid profile in group A	89
Table (11): Correlation between maternal weight gain during pregnancy and cord serum lipid profile in group B	91
Table (12): Correlation between gestational age and cord serum lipid profile in group A	92
Table (13): Correlation between gestational age and cord serum lipid profile in group B	93
Table (14): Correlation between birth weight and cord serum lipid profile in group A	94
Table (15): Correlation between birth weight and cord serum lipid profile in group B	95
Table (16): Correlation between body mass index and cord serum lipid profile in group A	96
Table (17): Correlation between body mass index and cord serum lipid profile in group B	97

List of Figures

<i>Figures</i>	<i>Page</i>
<i>Figures of review</i>	
Figure (I): Contributing factors in the pathogenesis of hyaline membrane disease	13
Figure (II): The lung in the respiratory distress syndrome of the neonates	15
Figure (III): Silver man retraction score.....	21
Figure (IV): The density of the several class of lipoprotein	40
Figure (V): The exogenous, endogenous and reverse cholesterol pathways	43
Figure (VI): Schematic representation of the relationship of adipose tissue lipolytic activity with lipoprotein metabolism	50
Figure (VII): Composition of surfactant recovered by alveolar wash	60
<i>Figures of results</i>	
Figure (1): Comparison between group B and group A as regards mean values of maternal weight gain during pregnancy	77

Figure (2):	Comparison between group B and group A as regards mean values of cholesterol	81
Figure (3):	Comparison between control and patients as regards mean values of triglyceride	81
Figure (4):	Comparison between group B and group A as regards mean values of HDL	82
Figure (5):	Comparison between group B and group A as regards mean values of LDL	82
Figure (6):	Regression analysis showing the correlation between infants - cholesterol and mothers- cholesterol	86
Figure (7):	Regression analysis showing the correlation between infants - triglyceride and mothers – triglyceride	86
Figure (8):	Regression analysis showing the correlation between infants -HDL and mothers –HDL	87
Figure (9):	Regression analysis showing the correlation between infants -LDL and mothers –LDL	87
Figure (10):	Regression analysis showing the correlation between infant -LDL and maternal weight gain during pregnancy	90

List of Contents

	<i>Page</i>
– List of tables	
– List of figures	
– List of abbreviations	
– Introduction	1
– Aim of the Work	3
– Review of Literature	
Chapter (1) respiratory distress syndrome.....	4
Chapter (2) lipid metabolism	32
Chapter (3) maternal and fetal lipid profile and placental lipid transfer	46
Chapter (4) pulmonary surfactant	60
– Subject and Methods	68
– Results	76
– Discussion	98
– Conclusion	112

– Recommendations	113
– Summary	114
– References	120
– Appendix	
– Arabic Summary	

List of Abbreviations

4-AP	.....4-aminophenazone
AA	.....Amino acids
ADP	.....Adenosine-di-diphosphate
ALA	.....Alpha linolenic acid
ANP	.....Atrial naturetic peptide
ATP	.....Adenosine-tri-diphosphate
BMI	.....body mass index
BPD	.....Bronchopulmonary dysplasia:
CBC	.....complete blood picture
DAP	.....Dihydroxyacetone phosphate
DHA	.....Decosaheptaenoic acid
EFA	.....Essential fatty acids
ELBW	.....Extremely low birth weight
EPA	.....Eicosapentaenoic acid
ETT	.....Endotracheal tube
FFA	.....Free fatty acids
FiO₂	.....Fraction of inspired oxygen
FRC	.....Functional residual capacity
G3P	.....Glycerol-3-phosphate
GMIVH	.Germinal matrix intraventricular haemorrhage

GPDGlycerol phosphate dehydrogenase
H₂O₂..... Hydrogen peroxide
HMD.....Hyaline membrane disease
HPLHuman placental lactogen
IDLsIntermediate-density Lipoproteins
IVHIntraventricular hemorrhage
L/S.....Lecithin/sphingomyelin
LBWLow birth weight
LCPUFA Long chain polyunsaturated fatty acids
LDLLow density lipoproteins
LPLLipoprotein lipase
MAPMean air way pressure
NECNecrotizing enterocolitis
NEFANon esterified fatty acids
PaCO₂Partial CO₂ pressur
PAFPlatelet-activating factor
PaO₂ Partial O₂ pressur
PDAPatent ductus arteriosus
PGPhosphatidyl glycerol
PtdCho ...Phosphatidylcholine
RDS.....Respiratory distress syndrome
ROPRetinopathy of prematurity

SP-A.....Surfactant protein-A

SP-B.....Surfactant protein-B

TGTriglyceride

V/QVentilation perfusion ratio

VLBWVery low birth weight

VLDL.....Very low density lipoproteins

يعانون من متلازمة الكرب التنفسي وأمهاتهم

رسالة

توطئة للحصول على درجة الماجستير في طب الأطفال

مقدمة من الطبيب

1 (÷ 9) 1 % 7) 1 4 - 7 0 9 |

بكالوريوس الطب والجراحة . جامعة عين شمس

تحت إشراف

ع) ا) ب) ج) د) هـ) و) ز) ح) ط) ي) ك) ل) م) ن) س) ع) ف) ق) ر) ت) ث) ذ) ظ) ض) ص) ش) خ) د) ذ

أستاذ طب الأطفال

كلية الطب - جامعة بنها

١) ٢) ٣) ٤) ٥) ٦) ٧) ٨) ٩) ١٠) ١١) ١٢) ١٣) ١٤) ١٥) ١٦) ١٧) ١٨) ١٩) ٢٠) ٢١) ٢٢) ٢٣) ٢٤) ٢٥) ٢٦) ٢٧) ٢٨) ٢٩) ٣٠) ٣١) ٣٢) ٣٣) ٣٤) ٣٥) ٣٦) ٣٧) ٣٨) ٣٩) ٤٠) ٤١) ٤٢) ٤٣) ٤٤) ٤٥) ٤٦) ٤٧) ٤٨) ٤٩) ٥٠) ٥١) ٥٢) ٥٣) ٥٤) ٥٥) ٥٦) ٥٧) ٥٨) ٥٩) ٦٠) ٦١) ٦٢) ٦٣) ٦٤) ٦٥) ٦٦) ٦٧) ٦٨) ٦٩) ٧٠) ٧١) ٧٢) ٧٣) ٧٤) ٧٥) ٧٦) ٧٧) ٧٨) ٧٩) ٨٠) ٨١) ٨٢) ٨٣) ٨٤) ٨٥) ٨٦) ٨٧) ٨٨) ٨٩) ٩٠) ٩١) ٩٢) ٩٣) ٩٤) ٩٥) ٩٦) ٩٧) ٩٨) ٩٩) ١٠٠)

أستاذ مساعد طب الأطفال

كلية الطب - جامعة بنها

(۱) (خ) ۹۷٪ (ب) ۹۰٪ (ج) ۸۵٪ (د) ۸۰٪

أستاذ مساعد الباثولوجيا الإكلينيكية

كلية الطب - جامعة بنها

كلية الطب – جامعة بنها

۲۰۰۹

Maternal And Cord Serum Lipid Profiles Of Preterm Infants With Respiratory Distress Syndrome

Thesis

*Submitted in Partial Fulfillment for
Master Degree in Pediatrics*

By

Hossam Mustafa Mohamed Shaheen
(M.B.B.Ch.)

Supervised By

Prof. Iman Abd El Rehiem Mohamed
Prof. of Pediatric
Faculty of Medicine - Benha University

Dr. Soha Abd El Hady Ibrahiem
Assistant Professor of Pediatric
Faculty of Medicine- Benha University

Dr. Eman Ramadan Abd El Gawad
Assistant Professor of Clinical Pathology
Faculty of Medicine - Benha University

Faculty of Medicine
Benha University
2009