

بسم الله الرحمن الرحيم





شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

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



يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار





بالرسالة صفحات
لم ترد بالأصل





بعض الوثائق الأصلية تالفة



**LACTATE DEHYDROGENASE (LDH),
CREATINE KINASE (CK), AND SPARTATE
AMINOTRANSFERASE (AST) AS A
PREDICTORS OF BRAIN INSULT
IN ASPHYXIATED NEONATES**

THESIS

*Submitted in Partial Fulfillment of
Master Degree in Pediatrics*

BY

Lobna Mohammed El- Houshy
M.B., B. Ch. (1991)

6/8 .9201

L. M

Under the Supervision of

Prof. Dr. Mohammed Fathalla Moustafa

*Professor of Pediatrics
Faculty of Medicine – Ain Shams University*

Dr. Sahar Mohamed Ahmed Hassanein

*Assistant Professor of Pediatrics
Faculty of Medicine – Ain Shams University*

Dr. Hanaa Mohamed El- Sayed Afify

*Assistant Professor of Clinical Pathology
Faculty of Medicine – Ain Shams University*

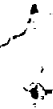
**Faculty of Medicine
Ain Shams University
2002**





1000

1000



Dedication

*To my parents who have
continuously given me their
support and care*

*To my husband who has
continuously encouraging me
throughout this work*

*To my lovely little twin daughters
and my lovely little son*



Acknowledgement

First and foremost I am grateful and thankful to God for allowing me to successfully accomplish this study.

I wish to thank and to express my sincere gratitude to **Prof. Dr. Mohammed Fathalla Moustafa**, Professor of Pediatrics, Ain Shams University for his indispensable guidance and keen suggestion in supervising the work. His constructive encouragement, unforgettable help and tremendous efforts, were behind the accomplishment of this work.

I would also like to express my sincere gratitude to **Dr. Sahar Mohamed Ahmed Hassanein**, Assistant Professor of Pediatrics, Ain Shams University for the valuable time, the great efforts she has given to me and her continues guidance and encouragement in preparing this study.

I wish to thank **Dr. Hanaa Mohamed El- Sayed Afify**, Assistant Professor of Clinical Pathology, Ain Shams University, for her continuous guidance and valuable suggestions which aided me greatly in the accomplishment of this study.

Finally, I would like to thank the parents of the neonates who participated in this work, their agreement was the main reason of the completion of this work.



Contents

	<i>Page</i>
- INTRODUCTION.....	1
- AIM OF THE WORK.....	3
- REVIEW OF LITERATURE:	
Chapter 1: Perinatal Asphyxia.....	4
Chapter 2: Intracranial Hemorrhage.....	66
Chapter 3: Enzymes.....	90
- PATIENTS AND METHODS.....	106
- RESULTS.....	117
- DISCUSSION.....	152
- SUMMARY.....	162
- CONCLUSION & RECOMMENDATIONS.....	165
- REFERENCES.....	167
- APPENDIX	
- ARABIC SUMMARY	

10

11

12

13

14

List of Tables

Table No.	Title	Page
1	Normal values for blood gases in term babies.....	5
2	Infant evaluation at birth by Apgar score.....	6
3	Sarnat and Sarnat stages of hypoxic-ischemic encephalopathy (1976).....	31
4	Determination of prognosis of HIE.....	65
5	Clinical features of catastrophic deterioration of PV-IVH.....	75
6	Clinical features of sultatory syndrome.....	76
7	Neurological abnormalities detected among studied asphyxiated neonates (n=38).....	124
8	Conventional predictors of perinatal asphyxia.....	125
9	Mean serum enzyme levels in asphyxiated neonates and control at first 24 hr (A) and after 72hr (B).....	129
10	Comparison between LDH, AST, TCK level in the 1 st 24 hours (A) and its levels at 72 hours after birth(B) among asphyxiated neonates (n= 38).....	130
11	Comparison of mean serum enzyme levels at 1 st 24 hr and at 72 hr between patients with HIE (n = 31) and those with HIE and IVH (n = 7).....	140
12	Comparison of LDH, AST, TCK levels in different stages of hypoxic- ischemic encephalopathy (n = 31), at 1 st 24 hr (A)and at 72 hours (B).....	141
13	Cranial ultrasound findings in the studied asphyxiated neonates (n = 38).....	143
14	The relationship between LDH, AST, TCK, levels in 1st 24 hours and the cranial ultrasound (Cr/ US) findings in the studied asphyxiated neonates (n = 38).....	144

<i>Table No.</i>	<i>Title</i>	<i>Page</i>
15	The relationship between mean serum LDH, AST, TCK, levels at 72 hr and cranial ultrasound (Cr/US) findings in the asphyxiated newborns (n = 38).....	145
16	Mean serum LDH, AST and TCK level at 1 st 24 hrs in non-survivors compared to survivors of asphyxiated neonate.....	147
17	Sensitivity, Specificity, positive, negative predictive values of LDH (A) for detection of presence of cerebral lesion detected by cranial ultrasound in asphyxiated neonates (n = 38), at cut-off value of :423U/L.....	148
18	Sensitivity, Specificity, positive, negative predictive values of AST(A) for detection of presence of cerebral lesion in asphyxiated neonates (n = 38), at cut-off value of :40U/L.....	149
19	Sensitivity, Specificity, positive, negative predictive values of TCK(A) for detection of presence of cerebral lesion detected by cranial ultrasound in asphyxiated neonates (n = 38), at cut-off value of :390U/L.....	150
20	The predictive values of elevated LDH(A), AST(A), TCK(A) for the detection of brain injury among the studied neonates (n = 68) at cut-off value of : 423U/L, 40U/L, and 390U/L respectively.....	151