



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





شبكة المعلومات الجامعية



شبكة المعلومات الجامعية

التوثيق الالكتروني والميكرو فيلم

جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

قسم

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



يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %



شبكة المعلومات الجامعية



بعض الوثائق الأصلية تالفة



شبكة المعلومات الجامعية



بالرسالة صفحات
لم ترد بالأصل

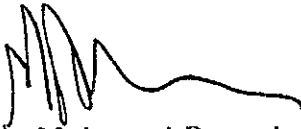
Seroprevalence of Non-A Non-B Viral Hepatitis Among Egyptians: Epidemiological Aspects

Thesis submitted by

Zeinab Korany Mohamed Hassan
(B.Sc. in Microbiology-Chemistry, 1993)
Microbiology Department

In Partial Fulfillment For The Degree Of Master Of Science In
Microbiology.

Supervisor



**Prof. Dr. Mohamed Ramadan
Abu-Shady**
Professor of Microbiology,
Head of Microbiology department
Faculty of Science,
Ain Shams University

**Prof. Dr. Mohamed Ahmed
Attia**

Professor of Virology and Immunology
head of Virology and Immunology Unit
National Cancer Institute,
Cairo University

Prof. Dr. Mohamed Reda Hamza
Professor of Medical Oncology,
Medical Oncology Department,
Dean of National Cancer Institute,
Cairo University



**Microbiology department
Faculty of Science, Ain Shams University.**

2000

B 2049

Supervisors

Prof. Dr. **Mohamed Ramadan Abu-Shady**

Professor and Chairman of Microbiology

Department,

Faculty of Science,

Ain Shams University

Prof. Dr. **Mohamed A. Attia**

Professor of Virology and Immunology,

Virology and Immunology Unit,

Cancer Biology Department

National Cancer Institute,

Cairo University.

Prof. Dr. **Mohamed Reda Hamza**

Professor of Medical Oncology.

Medical Oncology

Department,

National Cancer Institute,

Cairo University.

ACKNOWLEDGMENT

In the name of the God compassionate the merciful

Glory to Thee: of knowledge we have none, save what Thou has taught us: truth it is Thou who art perfect in knowledge and wisdom.

I express my deepest gratitude to Prof. Dr. Mohamed Ramadan Abu-Shady, chairman of Microbiology Department, Ain Shams University, for sponsoring this work, tremendous effort, unfailing support, maximum accuracy and for his generous guidance advice. It was him who helped analyzing the outline of the research point. I also thankful for his endurance, encouragement and fruitful advice. It was a great honor to work under his supervision.

My sincere and deepest gratitude is to the soul of Professor Dr. Mohamed A. Attia, Professor and head of Virology and Immunology Unit, NCI Cairo University, who proposed the present research study. His unfailing effort, support and continuous supervision throughout this work to its final form have been invaluable. He who also offered me a study leave twice to Amsterdam for completion of this

work within the collaboration program with Prof. Dr. Jaap Goudsmit, chairman of the Microbiology Department and Head of Retrovirus Lab AMC, Faculty of Medicine, University of Amsterdam, Netherlands. Therefore, my special gratitude goes also to Professor Dr. Jaap Goudsmit, whose support continued throughout most of the practical work , and offering me every facilities in his department to serve the purpose of my study. His valuable advice, guidance, encouragement, and sparing much of his time were much appreciated. My thanks also go to all colleagues and Lab staff of the retrovirus Lab in AMC, who offered every help and assistance.

I am also indebted to Prof. Dr. Mohamed Reda Hamza, professor of Medical Oncology Department, NCI, Cairo University, for his contribution and valuable supervision throughout the work, and providing the necessary facilities for the clinical part of this study.

I would like to express my sincere and deepest gratitude to my colleagues in NCI especially to Dr. Mohamed Hafez and the lab technicians for their help in collecting the samples and the clinical data.

Contents

Page

List of tables	
List of figures.....	
Abbreviations.....	
Abstract.....	
Aim of work	
Introduction	1
Epidemiology	1
Techniques of epidemiological practice	2
Descriptive epidemiology	2
Analytical epidemiology	3
Experimental epidemiology	5
Virology	5
Hepatitis of non-viral etiology.....	6
Hepatitis of viral etiology.....	7
Hepatotropic viruses	7
Hepatitis A virus	8
Hepatitis B virus	9
Hepatitis C virus	9
Hepatitis D virus	10
Hepatitis E virus	11
Hepatitis G virus	12
Non-Hepatotropic viruses	14
Herpesviridae and hepatitis	14
Herpes simplex virus (HSV).....	15
Varicella-Zoster virus	16
Cytomegalovirus (CMV)	16
Epstein-Barr virus (EBV).....	17
Human herpesvirus-6	18
Togaviridae and hepatitis	18
Rubella virus	18
Flaviviridae and hepatitis	19
Yellow fever	20
Dengue	20

Paramyxoviridae and hepatitis	20
Measles	21
Differential diagnosis	21
Hepatitis C virus	26
History	26
The virus	28
Structure	28
Nature and classification	28
Structure and function	29
Replication of HCV	33
Clinical Features of HCV infection	34
Acute hepatitis	34
Chronic hepatitis C	35
Extrahepatic disease	37
Viral Diversity	37
Epidemiology	41
Parenteral transmission	48
Previous hospitalization	48
Intravenous drug addiction	48
Non parenteral transmission	49
Methods of detection	51
Enzyme-linked immunosorbent assays (ELISA) ...	51
IgM anti-HCV	52
Nucleic acid detection	52
Polymerase chain reaction	52
Branched chain DNA (bDNA)	54
Hepatitis E virus	57
History	57
The virus	59
Classification	59
Structure	59
Genomic structure	60
Replication	61
Clinical Features	62

Diagnosis	63
Epidemiology	65
Treatment	67
Material and Methods	68
Routine clinical investigations	68
Subjects	68
History	69
Epidemiological data	69
Laboratory investigations	70
Sample collection and serum separations	70
Routine laboratory investigations	70
virological investigations	70
Detection of HBsAg	71
Detection of anti-HBcIgG AB	72
Detection of anti-HEV IgG AB	74
Detection of anti-HCV AB	75
INNO LIA-HCV AB test	76
HCV-Polymerase chain reaction	78
Branched chain DNA (bDNA)	83
Appendix	85
Diluents and reagents	85
Results	92
Epidemiological data	92
Descriptive epidemiological evaluation	92
Virological findings	95
Analytical epidemiological evaluation	98
HCV infection within different epidemiological settings ^s	98
HEV infection within different epidemiological settings ^s	100
HBV infection within different epidemiological settings ^s	101
HBV and HEV risk factors for HCV	104
Supplementary laboratory investigations	105
Discussion	146
Descriptive epidemiology	146
Epidemiology of HCV	146

Epidemiology of HEV	154
Analytical epidemiology	157
Analytical epidemiology of HCV	157
Analytical epidemiology of HEV	161
Conclusion	167
Summary	170
References	175
Arabic summary	215