DETERMINATION OF PROGESTERONE LEVELS IN HEV SERO-POSITIVE PREGNANT WOMEN OF LOW SOCIO-ECONOMIC STATUS

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Dedicated to my beloved Parents, Abdul Manan, Abdullah and loving Nano

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TABLE OF CONTENTS

Title	Page No.
Acknowledgements	v
Table of Contents	vii
List of Acronyms	x
List of Figures	xi
List of Tables	xiii
Abstract	xiv
Chapter 1	
Introduction	1
Chapter 2	
Literature Review	11
2.1 Epidemiology	14
2.2 The disease	16
2.3 Viral hepatitis and pregnancy	18
2.4 Hepatitis E and pregnancy	20
2.5 Causes of severity in pregnancy	25

2.5.1 Steroid Hormones 26

2.5.2 Immunological changes 27

2.5.3 Folate Deficiency 28

2.5.4 Genotype 29

2.5.5 Progesterone and its Receptor 30

Chapter 3

Materials and Methods 34

3.1 Sample collection 34

3.2 Sample processing 37

3.3 Antibody detection by ELISA 37

3.4 ELISA for measurement of progesterone levels 43

3.5 Detection by chromatography assay 45

3.6 Statistical Analysis 47

Chapter 4

Results 48

4.1 Results of IgG and IgM ELISA 48

4.1.1 Trimester wise IgG and IgM prevalence. 50

4.2 Results of Immunochromatography 51

4.3 Progesterone level measurement 52

4.3.1 Correlation between 1st trimester HEV positive and HEV negative patients 53

4.3.2 Correlation between 2nd trimester HEV positive and HEV negative patients 54

4.3.3 Correlation between 3rd trimester HEV positive and HEV negative patients 56

4.3.4 Progesterone levels in IgM and IgG positive patients 57

4.3.5 Progesterone levels in IgG positive patients and IgG negative patients in all trimesters 58

Chapter 5

Discussion 60

Chapter 6

References 65

LIST OF ACRONYMS

AVH	Acute Viral Hepatitis
ELISA	Enzyme Linked Immunosorbant Assay
FHF	Fulminant Hepatic Failure
HAV	Hepatitis A Virus
HBV	Hepatitis B virus
HCV	Hepatitis C virus
HE	Hepatitis E
HEV	Hepatitis E Virus
IgG	Immunoglobulin G
IgM	Immunoglobulin M
ORF	Open Reading Frame
PIBF	Progesterone Inducing Blocking Factor
PR	Progesterone Receptors
RIA	Radio Immunosorbent Assay

LIST OF FIGURES

Figure No.	Title	Page No.
Fig.1.1	HEV particle	3
Fig.1.2	Distribution of HEV genotypes	4
Fig.1.3	Transmission routes of HEV.	6
Fig.2.1	Geographical distribution of HEV	15
Fig.2.2	Hepatitis E virus infection, viremia and immune response.	17
Fig.2.3	Viral hepatitis in pregnant and non pregnant fulminant females.	25
Fig.2.4	Pathogenisis of HEV during pregnancy.	29
Fig.2.5	Hormonal levels in fulminant hepatic failure (FHF) patients.	30
Fig.2.6	Model depicting the pathways of HEV modulated pregnancy outcome.	33
Fig. 4.1	ELISA micro well plate for detection of anti-HEV IgG.	48
Fig.4.2	ELISA micro well plate for detection of anti-HEV IgM.	49
Fig.4.3	Trimesters and prevalence of HEV IgG and IgM	50
Fig. 4.4	Strip test for HBV and HCV detection	51
Fig. 4.5	ELISA micro well plate for detection of Progesterone level	52
Fig.4.6	Levels of progesterone (ng/ml) in HEV IgG +ve and IgG – ve patient population of Ist trimester.	53
Fig.4.7	Levels of progesterone (ng/ml) in HEV IgG +ve and IgG – ve patient population of 2nd trimester.	55
Fig.4.8	Levels of progesterone (ng/ml) in HEV IgG +ve and IgG – ve patient population of 3rd trimester.	56
Fig.4.9	Levels of progesterone in IgM, IgG and healthy population.	57

Fig.4.10	Levels of progesterone (ng/ml) in1st, 2nd and 3rd trimester in HEV IgG positive patient population.	58
Fig.4.11	Levels of progesterone (ng/ml) in1st, 2nd and 3rd trimester in HEV IgG negative patient population	59

LIST OF TABLES

Table No.	Title	Page No.
Table 1.1	Epidemics of HEV	2
Table 2.1	HEV and pregnancy	22

ABSTRACT

Hepatitis E virus (HEV) infection is endemic in developing countries including Pakistan and it leads to fulminant hepatic failure (FHF) and high mortality in pregnant women. An altered status of hormones and immunity are observed during pregnancy but the actual cause of high mortality is still unknown .The present study was carried out to assay progesterone levels in the HEV IgG sero-positive pregnant women population of low socio economic status.

Total 91 pregnant females from Rawalpindi district were recruited for the study. Serological tests for IgG and IgM against HEV were performed using ELISA kits .Hormone assay was performed on all samples by commercially available RIA kit. Out of 91 patients, 54 were found positive for the IgG and 9 were found positive for IgM presence. Alteration of levels of progesterone from normal level was observed in all the trimesters of pregnancy. High levels of progesterone were observed during the first trimester and extreme low levels were observed during the 2^{nd} and 3^{rd} trimester. Levels of progesterone were found to be higher ($P < 0.001$) in HEV IgM positive pregnant patients when compared to HEV IgG positive patients.

It can be attributed from the study that presence of HEV-IgG and HEV-IgM appears to be associated with altered levels of progesterone in women of low socioeconomic status. Poor nutritional and environmental conditions are potential risk factor associated with alterations in the normal hormonal level observed in pregnancy. These alterations may serve as a reason for high mortality rate seen in HEV positive pregnant females.