لآيــــة

يِسْمِ اللَّهِ الرَّحْدَ الْوَالرَّحْدِ

قال تعالى:

يَرْفَعِ اللَّهُ الَّذِينَ آمَنُوا مِنْكُمْ وَالَّذِينَ أُوتُوا الْعِلْمَ دَمَرَجَاتٌ * وَاللَّهُ بِمَا تَعْمَلُونَ خَيِرٌ

صدق الله العظيم

سورة المجادلة الأية (11)

Dedication

To my parents for supporting me and guiding me till I reach this stage

To my lovelysister & brothers

To my best friends who encouraged me

To my teachers who have made it possible

To every person hope to see me successful

To the people whom I love and they believe in me

Acknowledgement

Firstly all thanks to **ALMIGHTY ALLAH** for blessing my life.

Greatest thanks to my supervisor professor YousifFadlallah for his support, guidance and encouragement all the time.

Special thanks to working staff of Zinam Specialist Hospital for their cooperation and kindness.

Thanks are extended to Us. Suhair Ramadan in Research Laboratory for technical assistance.

Thanks are extended toUs. Wafa Mohamed, Us. Mohamed Karrar, and my colleagues NamarigAlfatih and Mawadda Ahmed.

Finally, faithful thanks are sent to all staff members of Microbiology Department – Sudan University of Science and Technology.

Abstract

This study was done in Zinam Specialist Hospital in Kharoum City during the period of February to May 2015 to detect Anti-HCV among patients with diabetes type2.

90 Blood samples were collected, separate sera which stored at -20° C until IgG antibodies were detected by ELISA. The results revealed that 5/90 (5.5%) of diabetic patients showed anti-HCV antibodies within age group 45-55 years. Two of these positive patients were females and three were males. Statistically, there was no significant difference between the smoker (1.1%) and nonsmoker (4.4%)P value (0.453), also there was no statistical difference between these with family history of diabetes 4 (4.4%) and those with no history 1(1.1%) P value (0.258).

These results needs further study to validate them.

المستخلص

أجريت هذه الدراسة بمستشفى زينام التخصصي بولاية الخرطوم في الفترة بين شهر فبراير حتى شهر مايو 2015م للكشف عن وجود أجسام مضادة لفيروس التهاب الكبد (ج) عند المرضى المصابين بالسكري النوع الثاني.

جمعت عينات الدم وتم فصل مصل الدم وحفظه بدرجة حرارة -20 درجة مئوية حتى فحصت للكشف عن وجود الأجسام المضادة لالتهاب الكبد الفيروسي (ج) بواسطة تقنية الإليزا. وقد اظهرت النتائج ان 5 (5.5%) من مرضى السكري كانت لديهم اجسام مضادة لإلتهاب الكبد الفيروسي ج في الفئة العمريه بين 45-55 سنة, اثنان من المرضى من الاناث وثلاثه منالذكور.

إحصائيا, لم يكن هناك اي علاقه ذات دلالة احصائية بين المدخنين 1 (1.1%) وغير المدخنين 4 (4.4%) وايضا لم يكن هناك علاقه ذات دلالة احصائية بين من لديهم تاريخ مرض السكري الوراثي (4.4%) والذين لم يكن لديهم تاريخ لمرض السكري الوراثي (4.1%)

Table of contents

Subjects	Page No.	
الأيـــة	I	
Dedication	II	
Acknowledgement	III	
Abstract	IV	
المستخلص	V	
Table of contents	VI	
List of Tables	VIII	
Chapter one: Introduction		
Introduction	1	
Rationale	4	
Objectives	5	
General objective	5	
Specific objectives	5	
Chapter two: literature Review		
2.1 Hepatitis C virus	6	
2.1.1 Structure of virion	6	
2.1.2 Classification of HCV	6	
2.1.3 Stability	7	
2.1.4 Replication of HCV	7	
2.1.5 Diagnosis	8	
2.1.6 Treatment	9	
2.2 Diabetesmellitus (DM)	10	
2.2.1 Definition	10	
2.2.2 Main types of diabetes	11	
2.2.3 Symptoms of type 2 diabetes	12	
2.3 Possible Pathogenesis of HCV	12	
Infection in the Development of		
Type 2 DM		
2.4 Previous studies	14	

Chapter three: Materials and Methods		
3.1 Study design	16	
3.2 Study area	16	
3.3 Ethical concideration	16	
3.4Inclusion criteria	16	
3.5Exclusion criteria	16	
3.6Sampling technique	16	
3.7Serum specimens collection	16	
3.8 ELISA for detection of HCV	17	
3.8.1 Principle of the assay	17	
3.8.2 Assay procedure	18	
3.8.3 Calculation of cut off	19	
3.8.4 Interpretation	20	
3.9 Statistical analysis	20	
Chapter four: The results		
4. The results	21	
Chapter five: Discussion		
5.1 Discussion	23	
5.2 Conclusion	25	
5.3 Recommendations	25	
References	26	
Appendix	32	

List of Tables

Legend	Page No.
Table (1) frequency of anti-HCV and gender	21
Table (2): frequency of anti-HCV and age	21
groups	
Table (3)Correlation between the presence of	22
HCV Abs and smoking	
Table (4) Correlation between the presence of	22
HCV Abs and family history of DM	