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Research Article

**THE FUNCTION OF THE LIVER AND THE TYPE 2 DIABETES
WHAT LIVER PLAYS A ROLE IN TYPE 2 DIABETES DISEASE
STUDY IN MAYO HOSPITAL LAHORE**¹Dr. Sidra Kanwal, ²Dr Yumna Tariq, ³Ghanwa Riaz¹Mayo Hospital Lahore, ²BHU Basti Mai Roshan Bhakkar, ³MTH Faisalabad**Article Received:** October 2020**Accepted:** November 2020**Published:** December 2020**Abstract:**

According to the research and observation of liver function and risk of type 2 diabetes plays a role in human health in Pakistan. The doctors and the nurses of Maya hospital concluded that day by day these diseases increase rapidly which can really harm our young people. It cause the doctors and the nurses of Maya Hospital to make a report to understand the current condition of liver function and risk of type 2 diabetes in Pakistan. As we, all know that type 2 diabetes can be very harmful for human body. It can also effect Liver for example type 2 diabetes can lead the patient to liver cancer, heart problem, kidney infection and many more there is a high chance of liver cancer if the patient is suffering from type 2 diabetes. So according to the observations and some tests the doctors and the nurses come to know that the type 2 diabetes and liver disease are increasing day by day in Pakistan and mostly in young people. These tests performed on some of patient in Maya Hospital Lahore under the guidance of professional doctors and trained nurses. Basically diabetes leads to many disease to the liver that include in the form of fat in your liver even if you drink little alcohol in this condition so it become very common for the patient who are suffering from diabetes 2. There are some of the symptoms if the patient is suffering from liver diseases that are if the patient skin and eye colour become yellow, swelling, pain in neck and leg, if the patient start vomiting and feel nausea and if the patient's urine colour become dark, itchy skin. These are some of the conditions and symptoms that occur when the patient have liver diseases grace of God they finally complete it.

Keyword: Liver disease, type 2 diabetes, inflammation, nausea, BMI, plasma concentration, insulin, glucose, heart disease.

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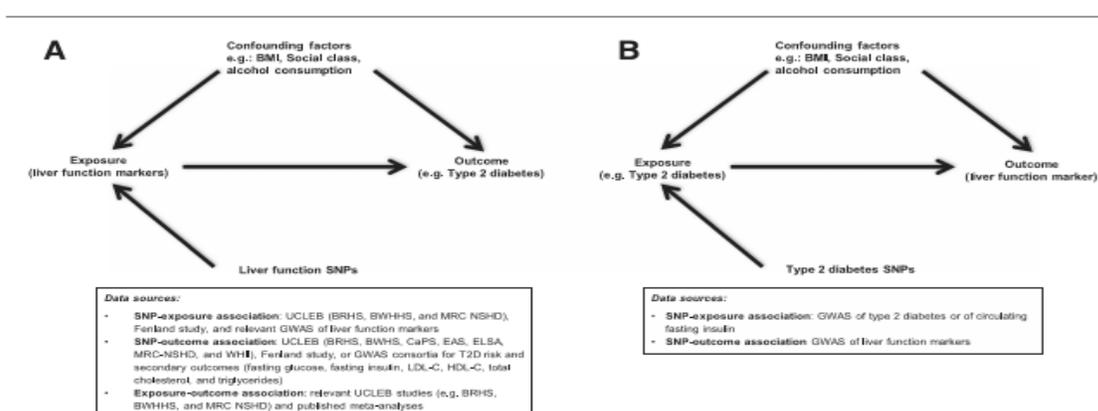


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INTRODUCTION:

According to the research and observation all the doctors and nurses of Mayo Hospital Lahore come to know that there are 4 stages of liver disease that are inflammation, Fibrosis, end stage liver disease ELSD, cirrhosis and last age that is liver cancer [1]. Inflammation is the stage in which the size of the liver become large and inflamed [2]. It is very early stage that cannot be much harmful but it can become dangerous and first step to the death so if patient take it seriously so the patient can be saved from many other problems [3]. The second stage is Fibrosis in this step the damage tissues of liver start to be replaced by the healthy tissue in liver [4]. The third step is cirrhosis in a stage there is a chance of scaring building and it is much more difficult for the liver to work properly and function perfectly [5]. The third

step end stage liver disease this is most dangerous stage in which patient have to be more careful otherwise, it can lead to liver cancer [6]. In this stage the patient who is suffering from this, dieses start to vomit and feel pain [7]. The fourth step liver cancer it is the last stage in which the liver is completely damage and it is very hard to to recover from this As we can see two cases that is describe the liver function SNPs and diabetes SNPs [8]. In first diagram, the factors that are found are BMI social class and the consumption of alcohol their outcomes can lead to type 2 diabetes and also harm the function of liver and can lead to swear damages for liver [9]. Now if we look at the second diagram which is shown in the report we can see that it is creating type 2 diabetes of fasting insulin and also the liver function makers [10].



METHODOLOGY:

The doctors and nurses of Mayo hospital Lahore collected 100 patient's data who is suffering from type 2 diabetes and liver Disease. According to the research and observation the doctors of Maya hospital Lahore come to know that diabetes can be very harmful for liver and can lead to death. So according to the reports and result of the patient in Maya hospital Lahore the doctors come to know that 47 % of the patients who are suffering from type 2 diabetes they also have liver problem and also type 2 diabetes affect a liver badly. So the doctors perform several tests to know the exact condition of the patient and also the nurses of mayo hospital Lahore perform test on Plasma concentration of ALT to check exact situation. For the purpose of completion

of this report the doctors and the nurses divide this report according to the patient's personal information and that are from their previous record of hospital. The first step was to check the history of the patient about the diseases they have and also the personal information like age, weight and BP and sugar record. The second step was to know that it if any of the family member of the patient have diabetes or any other medical issues related to liver disease according to the analysis and the reports of the patients the doctor come to know that the disease of diabetes and type 2 is more often found in in males rather than female. The doctors and the nurses also explore four stages for liver function Markers that are AST, ALT, ALT and GGT and so on.

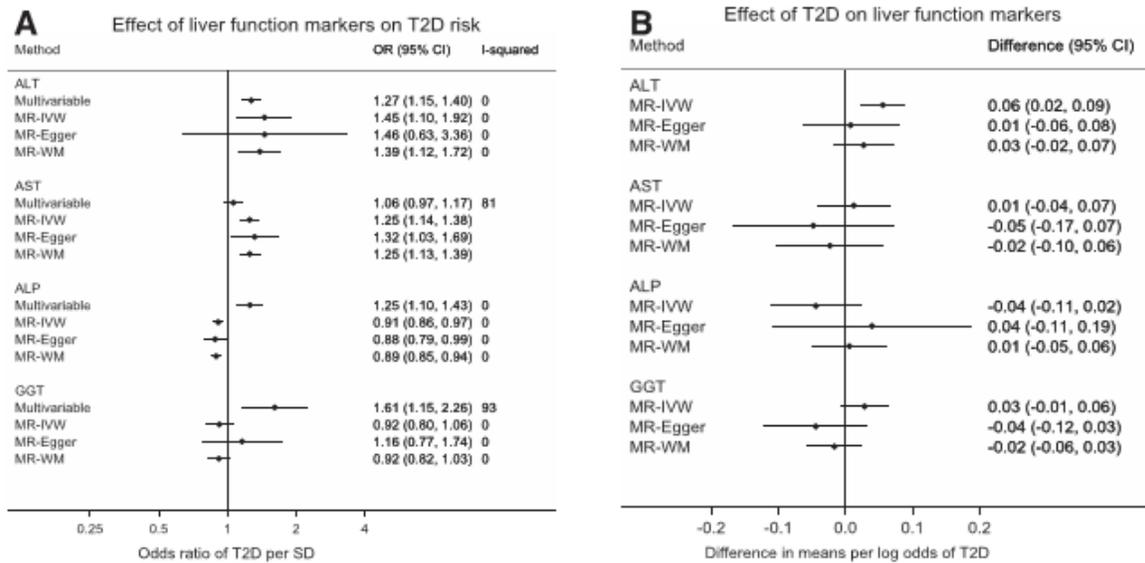


Table 1—The associations of individual SNPs (used as genetic instruments in MR analyses) with the relevant liver function markers in UCLEB studies, Fenland study, and GWAS

SNP	Liver function marker	Locus*	Effect size in SD units in UCLEB studies (95% CI)†	Effect size in SD units in Fenland study (95% CI)†	Effect size in SD units from published GWAS (95% CI)†
rs6834314	ALT	<i>HSD17B13</i> , <i>MAPK10</i>	0.05 (0.01, 0.09)	0.05 (0.02, 0.07)	0.06 (0.04, 0.08)
rs11597390	ALT	<i>CPN1</i>	0.09 (0.05, 0.13)	0.03 (0.01, 0.06)	0.04 (0.03, 0.06)
rs2143571	ALT	<i>SAMM50</i>	0.14 (0.09, 0.19)	0.07 (0.04, 0.12)	0.09 (0.07, 0.11)
rs2954021	ALT	<i>TRIB1n</i>	0.03 (-0.01, 0.07)	0.02 (-0.00, 0.04)	0.04 (0.02, 0.05)
rs17109512	AST	<i>GOT1</i>	-0.04 (-0.18, 0.11)	N/A	0.03 (-0.05, 0.1)
rs738407	AST	<i>PNPLA3</i>	0.13 (0.08, 0.19)	N/A	0.09 (0.06, 0.12)
rs738408	AST	<i>PNPLA3</i>	0.12 (0.08, 0.17)	N/A	0.19 (0.16, 0.22)
rs1780324	ALP	<i>NBPF3-ALPL</i>	0.07 (0.02, 0.12)	0.08 (0.05, 0.10)	0.09 (0.07, 0.11)
rs16856332	ALP	<i>ABCB11</i>	-0.02 (-0.20, 0.15)	0.06 (-0.01, 0.13)	0.14 (0.09, 0.19)
rs9467160	ALP	<i>GLPD1</i>	0.06 (0.01, 0.12)	0.10 (0.07, 0.13)	0.1 (0.08, 0.13)
rs514708	ALP	<i>ABO</i>	0.06 (0.00, 0.12)	0.08 (0.05, 0.11)	0.1 (0.08, 0.13)
rs2236653	ALP	<i>ST3GAL4</i>	0.01 (-0.05, 0.07)	0.07 (0.04, 0.10)	0.06 (0.04, 0.08)
rs7186908	ALP	<i>HPR</i> , <i>PMFBP1</i>	-0.02 (-0.09, 0.05)	0.02 (-0.01, 0.05)	0.07 (0.05, 0.1)
rs7267979	ALP	<i>ABHD12</i> , <i>GINS1</i> , <i>PYGB</i>	0.03 (-0.02, 0.08)	0.07 (0.04, 0.10)	0.05 (0.03, 0.07)
rs281377	ALP	<i>ABO</i>	0.00 (-0.05, 0.06)	0.06 (0.04, 0.09)	0.07 (0.05, 0.09)
rs314253	ALP	<i>ASGR1a</i> , <i>DLG4n</i>	0.02 (-0.04, 0.07)	0.04 (0.01, 0.07)	0.08 (0.06, 0.1)
rs579459	ALP	<i>ABO</i>	0.08 (0.02, 0.14)	0.25 (0.22, 0.28)	0.31 (0.28, 0.34)
rs6984305	ALP	<i>PPP1R3B</i>	-0.03 (-0.11, 0.05)	0.08 (0.04, 0.12)	0.1 (0.07, 0.13)
rs7923609	ALP	<i>JMJD1Cnce</i> , <i>NRBF2e</i>	0.05 (0.00, 0.10)	0.09 (0.06, 0.11)	0.08 (0.06, 0.1)
rs174601	ALP	<i>C11orf10e</i> , <i>FADS1e</i> , <i>FADS2ne</i>	-0.00 (-0.06, 0.05)	0.06 (0.03, 0.08)	0.06 (0.04, 0.09)
rs2954021	ALP	<i>TRIB1</i>	0.07 (0.01, 0.12)	0.04 (0.01, 0.06)	0.05 (0.03, 0.07)
rs10819937	ALP	<i>ALDOBo</i> , <i>C9orf125n</i>	Not in UCLEB	0.06 (0.02, 0.09)	0.09 (0.06, 0.12)
rs1497406	GGT	<i>RSG1</i> , <i>EPHA2</i>	0.05 (0.01, 0.09)	0.07 (0.04, 0.09)	0.06 (0.04, 0.07)
rs12145922	GGT	<i>CCBL2</i> , <i>PKN2</i>	-0.02 (-0.05, 0.02)	0.01 (-0.02, 0.03)	0.04 (0.03, 0.06)
rs1335645	GGT	<i>CEPT1</i> , <i>DENND2D</i>	Not in UCLEB	0.03 (-0.01, 0.07)	0.07 (0.04, 0.09)
rs10908458	GGT	<i>DPM3</i> , <i>EFNA1</i> , <i>PKLR</i>	0.04 (0.01, 0.07)	0.05 (0.02, 0.07)	0.06 (0.04, 0.07)
rs13030978	GGT	<i>MYO1B</i> , <i>STAT4</i>	0.07 (0.02, 0.12)	0.03 (0.01, 0.06)	0.06 (0.04, 0.08)
rs2140773	GGT	<i>EFHD1</i> , <i>LOC100129166</i>	-0.01 (-0.04, 0.03)	0.02 (-0.01, 0.04)	0.05 (0.03, 0.06)

RESULT:

As through the reports and observation held by the doctors of Mayo hospital Lahore we come to know that type 2 diabetes and liver diseases are so much related that both of them can cause really danger to the human body. For example it can cause risk of stroke and also extreme, thirst, risk of heart attack, feeling low energy, lack of consciousness, disturbance in eyesight, risk of infections and also high blood pressure. If the person is suffering from diabetes then there is a high risk of developing high blood pressure. The patient who is suffering from diabetes can also have the high rate of bacteria in his body which can be the cause of infection. If the patient does not take proper treatment of type 2 diabetes then the patient can feel weakness in his body and that can lead to unconsciousness and also sometimes the patient feel extreme thirsty and urge of drinking water. High blood pressure can be really dangerous for the heart of the human body and there is also the risk of cardiovascular disease so the patient should take good care of them and also take the medicine daily which is prescribed by the doctors. If the patient takes good care of himself then there is a high chance of improvement in their body and cannot lead to other problems in the body.

DISCUSSION:

According to the study and the observation from the test the doctors and the nurses find out that type 2 diabetes can also be related to liver complications [11]. It also include chronic kidney disease, cardiac, abnormality, cardiovascular disease, sleep pane, and much more most of the time non-alcoholic fatty liver disease and its relationship with cardiovascular disease is mostly common in patient [12]. The liver disease can also be caused by type 2 diabetes [13]. So to reduce this disease and to help the patient all over the Pakistan Mayo hospital Lahore perform a great role in it by making this report under profession doctors and nurses [14]. It was very difficult to achieve this goal but with the help of loyal doctors and the effort of nurses the Mayo hospital Lahore achieve this goal and by the grace of God they finally complete it [15]. As we can see in the two tables table a and table be in first table effect of Liver function maker on t2d risk is described [16]. According to this table 95% CI is developed and also the table shows odd ratio of t2d per SD the second method that is B it represent effect of t2d on liver function maker it shows the difference of 95% CI in the method B [17]. The difference in means per Log odds of t2d It's been a long time there is a link Discover between the liver disease and diabetes that are described by only few doctors [18]. After that multiple observations

and research show the result that there is definitely link between liver disease and diabetes and it is also increasing day by day according to the research of the doctors of Mayo hospital Lahore [19]. We come to know that everyday 58% diabetes type 2 cases are reported in Pakistan these results are consistent of MR studies [20].

CONCLUSION:

According to the result and the reports that is observed by the doctors and nurses of Mayo hospital Lahore it sure that Cause of fatty liver can be Side effect of meditation fats in blood Diabetes Rapid amount of weight loss and genetic inheritance these can be the causes of liver diseases and diabetes. According to the medical history Of patients who is suffering from liver disease and also at the same time with diabetes type 2 we come to know that it is creating very serious impact on humans and if some step not taken against this disease then it can start rapidly all around the country Pakistan. It is also increasing day by day according to the research of the doctors of Mayo hospital Lahore we come to know that everyday 58% diabetes type 2 cases are reported in Pakistan these results are consistent of MR studies.

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