DOI Number: 10.37506/v20/i1/2020/mlu/194324

Measurement of Lipid Profile in Fasting Persons

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Abstract

This study was performed within the DM center in Al-Sadder Teaching Hospital in Al-Najaf province to see the impact of not having breakfast for males in relation with Diabetes Mellitus sort two and supermolecule Profile. This study includes (25) male that not having breakfast , and (5) male that thought to be management cluster. (The results show important increase (P≤0.05) in abstinence glucose, cholesterin, acylglycerol, LDL, lipoprotein and high-density lipoprotein in comparison with management group).

Keyword*: Mellitus type two, supermolecule Profile, Breakfast .*

Introduction

Breakfast is the first meal of each day, most frequently eaten within the early morning before enterprise the day's work(1). Among English speakers, "breakfast" will be accustomed discuss with this meal or to discuss with a meal composed of ancient breakfast foods (such as eggs, dish and sausage) served at any time of day. The word virtually refers to breaking the fasting period of the previous night)(2). Breakfast is that the most significant meal of the day has been spoken by innumerable moms throughout the ages. it's been voiceless within the ears of faculty youngsters on early-to-rise mornings for hundreds of years, however the depth of understanding on why breakfast is thus necessary has solely been delivered to light-weight in recent years. The aspect effects of not intake breakfast negatively impact weight, secretion health, memory, noesis and mood)(3). According to the studies conducted on the negative effects of not eating breakfast, that people who skip the morning meal they had the chances higher for the exact opposite of the goal of slimming. Skipping breakfast increases the craving for sugary and fatty foods, in addition hunger pangs will be intense, and ultimately will deal with whatever comes in front of we during the day due to high levels of hunger and the greater the amount of food intake stab to overcome the daily calories recommended, and the increase continued to skip breakfast eventually lead to weight gain, not weight loss(4). Avoiding breakfast can have negative effects on energy and mood, help we avoid breakfast can reduce our energy levels and adversely affect our memory(5). Skip breakfast make we abound in eating during the day, which in turn paves the way for the increased prevalence of obesity that a person who suffers from overweight or obese have an increased risk of cancer(6). Hypoglycemia is a medical term used to refer to lower blood sugar levels, skipping meals lead to a significant drop in blood sugar levels, in turn, causes the release of hormones that can compensate for low levels of sugar, that on the other hand increases the pressure levels blood, causing headaches and migraines. The incidence is highest when neglect breakfast, because it is the first meal of the day, which consumes about 12 hours of fasting(7). Meal containing low levels of the protein can affect the keratin levels, reduce hair growth and cause hair loss, breakfast is the perfect meal any day, and has a great role in promoting hair follicle growth, so if you want to enjoy a strong and healthy hair with the disposal of hair loss, you have to deal with a breakfast rich in protein per day should(8). people who eat breakfast have a higher metabolic rate that skipping breakfast will cause low blood sugar levels, causing headaches and nausea(9). DM is a metabolic diseases cluster characterised by symptom ensuing from defects in insulinaction , hormone secretion, or each of them. symptom if his a Chronic have metabolic disturbances and DM cause impact on tissue and organ harm also as disfunction involving the, kidneys, nervous, tube-shaped structure systems and eyes(10). the foremost common kind of polygenic disease is sort two polygenic disease.

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over ninety nothing of individuals with polygenic disease have sort two. this type of polygenic disease is joined (with the older age, obesity, case history of polygenic disease, previous history of physiological condition polygenic disease, physical inactivity and ethnicity[11]. Around eighty of people with kind two polygenic disease square measure overweight. sort two polygenic disease is more and more being analyzed in kids and teenagers. At the purpose once sort two polygenic disease is analyzed, the duct gland is often making enough hormone, however for obscure reasons, the body cannot utilize the hormone adequately, a condition known as hormone opposition. Following quite whereas, hormone generation diminishes. the end result is like for kind one diabetes-glucose develops within the blood and therefore the body cannot utilize its primary wellspring of fuel[12]. Supermolecule profile, additionally referred to as coronary risk panel or supermolecule panel, is that the collective term to the estimation of total cholesterin (TC), triglycerides (TG), rarity lipoprotein-cholesterol (LDL-C) and high density lipoprotein-cholesterol (HDL-C), accustomed assess risk of DM unwellness. associate degree extended supermolecule profile might embrace terribly rarity conjugated protein cholesterin (VLDL-C)[13]. The 2 main sorts of supermolecule within the blood square measure cholesterin and triglycerides that square measure incorporated within the lipoproteins that act as a vehicle for his or her transport. There square measure four major subtypes of lipoproteins that disagree in their mass, supermolecule and fat content, together with rarity lipoprotein-cholesterol (LDL-C), terribly rarity lipoprotein-cholesterol (VLDL-C), high density lipoprotein-cholesterol (HDL-C) and particle[14]. Dyslipidemia portrayed by raised complete cholesterol, LDL-C and brought down HDL-C, is an ordinary hazard consider watched myocardial dead tissue patients and is the significant reason for atherosclerosis are proposed to act synergistically with non-lipid hazard variables to build atherogenesis. Expanded TG and diminished HDL-C and the expanded TG/HDL-C proportion are considered as real hazard factors in the improvement of insulin opposition and metabolic disorder. The exactness of TG/HDL-C proportion in anticipating CVD hazard isn't appropriately by late research[15].

Materials and Method

The study was conducted on at random designated (25) male that not having breakfast within the DM center in Al-Sadder Teaching town in Al-Najaf province. A group of (5) apparently management subjects were enclosed as a healthy group. The age of males was vary of 35-65y . the data of males were obtained through a form consisted of the name, age, weight, Blood pressure .

Blood and humor collected from patient that whigh tests the flowing :-

1-Determination of abstinence glucose concentration (FBG)[16].

2-Measurements of total cholesterin (TC)[17, 18].

3-Measurements of Triglycerides (TG)[19].

4-Calculation of rarity lipoprotein-cholesterol (LDL-C)

5-Calculation of terribly rarity lipoprotein-cholesterol (VLDL-C)

6-Measurements of high density lipoprotein-cholesterol (HDL-C)[20].

Results

The results of this Table 1 indicate a big increase (P≤ 0.05) in abstinence glucose (FBG) level, cholesterin (TC), Triglyceride(TG), LDL, lipoprotein and high-density lipoprotein in males that not having breakfast (338.411.21±, 357.5612.12±, 299.2411.55±, 255.56±12.21, 59.042.49±, 35.8±0.77) severally in comparison with management groups(931.09±, 2.30±104.2,67±1.09, 61.2±2.14, 13.4±0.21, 29.60.45±) severally.

Table 1: humor level of FBG and supermolecule profile elements in males while not breakfast and management teams.

Parameters	Mean±S.D	
	Males without breakfast	Control
FBG (mg/dl)	338.4±11.21*	93±1.09
Cholesterol (m mol/L)	357.56±12.12*	104.2±2.30
Triglyceride (m mol/L)	299.24±11.55*	67±1.09
LDL-C (m mol/L)	255.56±12.21*	61.2±2.14
VLDL-C (m mol/L)	59.04±2.49*	13.4±0.21
HDL-C (m mol/L)	35.8±0.77*	29.6±0.45

* means that important distinction at (P≤ 0.05)

Discussion

The study unconcealed a big elevation in abstinence glucose in patients comparison with management cluster as conferred within the table. These results square measure expected thanks to the very fact that the most characteristic feature of DM is symptom. glucose is tightly controlled by 2 key processes: hormone secretion by exocrine gland ß-cells in response to a nutrient and hormone action on major target organs, i.e. striated muscle, liver and fat. T2DM, is usually related to fatness and results from scarce hormone production/secretion and hormone Receptor (IR)[21]. The results show that there's a big increase in humor cholesterin, triglycerides, LDL-C and VLDL-C in patients comparison with management cluster as conferred within the table. The dyslipidemia detected within the patients cluster square measure common in diabetic patients and has totally different explanations[22]. In polygenic disease, glucose isn't used by tissues leading to symptom, the fatty acids from fat square measure mobilized for energy purpose and way over fatty acids is accumulated within the liver then reborn to triglycerides[23]. The dyslipidemia of visceral fatness is that of will increase within the proportion of little dense low-density lipoprotein particlesand elevated triglycerides. a rise in VLDL-C occurred in DM thanks to increase handiness of aldohexose for VLDL-C synthesis and reduce in conjugated protein enzyme activity resulting in decrease of VLDL-C from peripheral circulation. Active lipolysis in DM redoubled cholesterin synthesis resulting in the buildup of this compound within the walls of blood arteries[24]. Visceral fat refers to intra-abdominal fat round the intestines and correlates with liver fat. Visceral fat has metabolic characteristics that disagree from that of body covering fat. it's a lot of metabolically active with relation to free carboxylic acid turnover; the redoubled flux of free fatty acids promotes IR at a cellular level and will increase viscus lipoprotein production and will increase adipocyte-derived free fatty acids prompting triglycerides accumulation in these tissues[25]. The supermolecule abnormalities related to IR have an effect on all supermolecule fractions. they're characterised by elevated triglycerides levels, elevated postprandial triglycerides wealthy remnant lipoproteins, high HDL-C and high little dense low-density lipoprotein particles. This pattern correlates powerfully with vessel risk and treatment decreases this risk. Poor glycemic management is related to hypertriglyceridemia and in some patients, high humor LDL-C and high HDL-C concentration[26], 1990). The hypertriglyceridemia results from each redoubled substrate handiness (glucose and free fatty acids) and faded lipolysis of VLDL-C oncet of expressed symptom and is believed to result partially to hyperinsulinemia[27]. Elevated levels of supermolecule peroxide in DM could also be thanks to the alteration of perform of erythrocytes membrane. This inhibits the activity of SOD catalyst resulting in accumulation of superoxide radicles that cause the most supermolecule peroxidation and tissue harm in polygenic disease. the opposite necessary issue for the dyslipidemia in T2DM patients thanks to IR that is closely associated with cardiovascular disease, obesity, redoubled lipoprotein and triglycerides[28].

Conflict of Interest : There was no interest in this study.

Source of Funding : By the authors themselves .

Ethical Clearance : Ethical clearance was obtained from Faculty of Science , University of Kufa ,Iraq.

Acknowledgment- The authors are thankful to Prof. Dr. Ali Abid Abojassim for their help in this work.

Acknowledgement: I would like to Ali Abid Abojassim member of physic department faculty of science university of Kufa for cooperation in this work.

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