



# The Choice of Hypoglycemic Therapy in Patients with Diabetes Mellitus Depending on the Functional State of the Liver

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## INTRODUCTION

Hypoglycemia, also called low glucose, it is a fall in glucose to levels underneath ordinary. This may bring about an assortment of indications including ungainliness, inconvenience talking, disarray, loss of cognizance, seizures or passing. A sentiment of craving, perspiring, unsteadiness and shortcoming may likewise be available. Manifestations ordinarily please rapidly [1].

The most widely recognized reason for hypoglycemia is prescriptions used to treat diabetes mellitus, for example, insulin and sulfonylureas. Hazard is more noteworthy in diabetics who have eaten not exactly regular, practiced more than expected or alcoholic liquor. Different reasons for hypoglycemia incorporate kidney disappointment, certain tumors, liver ailment, hypothyroidism, starvation, natural mistake of digestion, serious contaminations, responsive hypoglycemia and various medications including liquor. Low glucose may happen in any case solid infants who have not eaten for a couple of hours [2].

## DESCRIPTION

The glucose level that characterizes hypoglycemia is variable. In individuals with diabetes, levels under the 3.9 mmol/L (70 mg/dL) are analytic. In grown-ups without diabetes, side effects identified with low glucose, low glucose at the hour of side effects and improvement when glucose is reestablished to typical affirm the analysis [3]. Something else, a level less than 2.8 mmol/L then the following activity might be used. In infants, a level less than 2.2 mmol/L (40 mg/dL) or less than 3.3 mmol/L then the side effects are available, shows hypoglycemia [4]. Different tests that might be helpful in deciding the reason incorporate insulin and C peptide levels in the blood.

Among individuals with diabetes, anticipation is by coordinating the nourishments eaten with the measure of activity and the drugs used. When individuals feel their glucose is low, trying with a glucose screen is suggested. A few people have hardly any underlying side effects of low glucose and successive routine testing in this gathering is recommended [5]. Treatment of

hypoglycemia is by eating nourishments high in straightforward sugars or taking dextrose. In the event that an individual can't take food by mouth, glucagon by infusion or in the nose may help. The treatment of hypoglycemia random to diabetes incorporates regarding the hidden issue also and a solid eating routine. The expression "hypoglycemia" is now and then erroneously used to allude to idiopathic postprandial disorder, a questionable condition with comparative side effects that happen following eating yet with ordinary glucose levels [6].

Oral hypoglycemic medications are utilized uniquely in the treatment of type 2 diabetes which confusion is including protection from emitted insulin. Type 1 diabetes includes an absence of insulin and requires insulin for treatment. There are presently four classes of hypoglycemic medications.

- Sulfonylureas
- Metformin
- Thiazolidinediones
- Alpha-glucosidase inhibitors

These medications are affirmed for utilize just in patients with type 2 diabetes and are utilized in patients who have not reacted to consume less calories, weight decrease and exercise. They are not affirmed for the treatment of ladies who are pregnant with diabetes [7].

Diabetes mellitus, generally known as diabetes, is a gathering of metabolic issue portrayed by a high glucose level over a drawn out time of time. Symptoms regularly incorporate continuous pee, expanded thirst and expanded appetite. If left untreated, diabetes can cause numerous complications. Acute difficulties can incorporate diabetic ketoacidosis, hyperosmolar hyperglycemic state or death. Serious long haul intricacies incorporate cardiovascular infection, stroke, ceaseless kidney illness, foot ulcers, harm to the nerves, harm to the eyes and subjective impairment.

Diabetes is expected to either the pancreas not delivering enough insulin or the phones of the body not reacting

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appropriately to the insulin produced. There are three principle sorts of diabetes mellitus.

- Type 1 diabetes results from the pancreas' inability to deliver enough insulin because of loss of beta cells. This structure was recently alluded to as "insulin-subordinate diabetes mellitus" or "adolescent diabetes". The loss of beta cells is brought about by an immune system response. The reason for this immune system reaction is unknown.
- Type 2 diabetes starts with insulin opposition; a condition wherein cells neglect to react to insulin properly. As the illness advances, an absence of insulin may likewise develop. This structure was recently alluded to as "Non-Insulin-Subordinate Diabetes Mellitus" (NIDDM) or "grown-up beginning diabetes". The most widely recognized reason is a mix of exorbitant body weight and deficient exercise.
- Gestational diabetes is the third principle structure and happens when pregnant ladies without a past history of diabetes grow high glucose levels.

To study the dynamics of cytolysis and carbonyl stress (Methylglyoxal (MG)) in patients with type 2 Diabetes Mellitus (DM2) and NAFLD on the background of various hypoglycemic therapies.

The study included 48 patients,  $53.8 \pm 11.14$  years, with SD2 and NAFLD and 20 people in the control group. Viral hepatitis was excluded, toxic and drug-induced liver injury. Anthropometric research included: Determination of waist circumference, body weight, height and index calculation Body Mass Index (BMI). Indicators of cytolysis (ALT, AST) and carbonyl stress were evaluated. Patients were divided into 2 groups: 1) inhibitors sodium-glucose cotransporter type 2+Metformin (MF); 2) preparations sulfonylureas (PSU)+MF.

The BMI was  $35.8 \pm 8.67$  kg/2 on average for the group, from  $109.5 \pm 16.48$  sm, which indicated abdominal type of obesity. In patients with DM2 and NAFLD, a higher concentration of MG was detected, compared with the control group [8].

The following dynamics of indicators: In the first group (I-NGLT-2+MF) before BMI treatment was  $35.1 \pm 6.66$ , after 12 months  $33.8 \pm 6.95$ , in the second group ((PSM)+MF)  $36.48 \pm$

$7.66$ ;  $39.26 \pm 7.64$ , respectively, the level HbA1c: I-NGLT-2+MF: before treatment  $8.18 \pm 1.52$ , after 12 months  $7.37 \pm 1.76$ , (PSM)+ MF:  $8.51 \pm 1.58$ ;  $8.65 \pm 1.14$  accordingly, ALT level: I-NGLT-2+MF: before treatment  $72.95 \pm 58.79$ , after 12 months  $29.42 \pm 18.27$ , (PSM) + MF:  $39.29 \pm 45.89$ ;  $36.26 \pm 23.97$ , respectively.

## CONCLUSION

After 12 month of treatment, in the first group, there was more pronounced weight loss, HbA1c, ALT, MG, as a product of excessive glycosylation, carbonyl stress index. Based on the results of the preliminary analysis, we can say that NGLT2 + MF are more preferable in comparison with PSU in combination with MF, in these patients.

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