

Hyperglycemia in type 2 diabetes mellitus patients on treatment with oral hypoglycemic drugs: Often overlooked against hypoglycemia

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Background: Diabetes Mellitus is worldwide disorder. WHO has defined Diabetes as increased level of blood sugar that leads to microvascular and macrovascular complications of diabetes. It is demonstrated by The Diabetes Control and Complication Trial and the United Kingdom Prospective Diabetes Study, that strict glycemic control significantly decreases the risk of long-term diabetes complications. Amongst the treatment goals recommended by American Diabetes Association, target level of preprandial plasma glucose is 70–130 mg/dL (3.9–7.2 mmol/L). But in clinical practice the dictum 'Hyperglycemia is better than hypoglycemia' is followed more oftenly. Majority of the patient population with diabetes mellitus is treated with hypoglycemic agents. On this basis the aim of the present study is to the level of plasma glucose in patients treated with oral hypoglycemic agents.

Method: Study included 100 patients (54 male and 46 female) from age group 40-60 years with Type 2 diabetes mellitus, those were on treatment with oral hypoglycemic drugs at least for an year, randomly selected from Diabetic Clinic of Lok Nayak Hospital, New Delhi. Fasting sample was collected in the morning after 8-10 hr of overnight fasting. Plasma glucose level was estimated by Glucose Oxidase-peroxidase method on autoanalyzer.

Results: 66% patients were having plasma glucose level > 130 mg/dL (7.2 mmol/l) (Mean FBS =199.30,SD=39), 26% were having glucose level > 200 mg/dL (11.11 mmol/l) (mean FBS=256.95, SD=39) and 10 % patients were having glucose level > 250 mg/dL (13.88 mmol/l)(Mean = 288.9 mg/dL, SD=35). Only 34% were found to be within target fasting plasma glucose value <130mg/dL (7.2 mmol/l) (Mean 107.58, SD=14.44). Values were found to be more in females (mean=176.41,SD=71.52) as compared to male population (mean=153.95) . As expected, no patient was found to be having hypoglycemia.

Conclusion: Majority of the patients who are under treatment with Oral Hypoglycemic Drugs, particularly in government institutes continue to have hyperglycemia. This may in long course of time, lead to microvascular and Macrovascular complications of diabetes mellitus.