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To Study the Effects of Comparison of Insulin plus OHA versus Combination of OHA Alone in Type 2 Diabetes Mellitus

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Background
In type 2 diabetes with secondary OHA failure, therapy with combination of multiple oral hypoglycaemic agents or combination of oral hypoglycaemic agent with insulin is known to improve glycemia in patients with type 2 diabetes mellitus, the best combination to achieve target fasting plasma glucose concentration of less than 130mg/dl or glycosylated hemoglobin (HbA1C) below 7% is not very clear.

Aims and Objectives
1) To study the effect of combination oral hypoglycaemic agent with and without insulin on glycemic control, lipid profile and BMI.
2) To compare the beneficial effects in the above two study group

Methods
This present study was a cross sectional, hospital based, non-randomized, and comparative study conducted at the hospital attached to Katihar Medical College. A total of 100 Type 2 DM patients fulfilled the inclusion criteria, divided into two groups: those who received combination of oral hypoglycemic agent with the insulin (comb OHA+INS) and those who received combination oral hypoglycemic agent (comb OHA) alone. These groups were evaluated for baseline demographic, diabetic characteristics, glycemic control, lipid profile and BMI. These two groups were compared with respect to glycemic control, lipid profile and BMI.

Results
Both groups showed poor glycemic control. Proportion of patients with HbA1C< 7% is 9(18%) in comb OHA group and 13(26%) comb OHA+INS group (P>0.01). The proportion of patients with FBS <130mg/dl and PPBS <180 mg/dl (p<0.01) was significantly better in patients with comb OHA+INS group, shows better short term glycemic control. However, no significant difference in the lipid profile and BMI were found in either group.

Interpretation and Conclusion

In type 2 diabetes with secondary OHA failure, therapy with either the combination of multiple OHA or combination of OHA with insulin, only smaller proportion of patients achieved the glycemic target (HbA_{1C}<7) while poor long term glycemic control (HbA_{1C}>7) was seen in majority of patients among both groups.

Mean HbA_{1C} is achieved well among patients on comb OHA+INS treatment group whose mean duration of diabetes was longer as compared to patients on comb OHA treatment group whose mean duration of diabetes was shorter.

I conclude that, early initiation of intensive insulin therapy may benefit all patients with diabetes irrespective of mean duration of diabetes

Keywords: Diabetes; $HbA_{1C;}$ Comb OHA; Comb OHA+INS.

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