

## **[Keynote Talk]: Treatment Satisfaction and Safety of Sitagliptin versus Pioglitazone in Patients with Type 2 Diabetes Mellitus Inadequately Controlled on Metformin Monotherapy**

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**Abstract :** Introduction: Diabetes Mellitus is a chronic metabolic disease affecting millions worldwide. Metformin is the most commonly prescribed first line oral hypoglycemic drug for type 2 diabetes mellitus, but due to progressive worsening of blood glucose control during the natural history of type 2 diabetes, combination therapy usually becomes necessary. Objective: This study was designed to assess the treatment satisfaction between Sitagliptin versus Pioglitazone added to Metformin in patients with type 2 diabetes mellitus (T2DM). Methods: We conducted a prospective, open label, randomized, parallel group study in SIMS, Hapur, U.P. Eligible patients fulfilling inclusion criteria were randomized into two groups having 25 patients in each group using tab Sitagliptin 100mg, tab Pioglitazone 30mg added to ongoing tab Metformin (500mg) therapy for 16 weeks. The follow-up visits were on weeks 4,12 and 16. Result: 16 weeks later, addition of Sitagliptin 100mg compared to that of Pioglitazone 30 mg to ongoing Metformin therapy provided similar glycosylated hemoglobin (HbA1c) lowering efficacy in patients with T2DM with inadequate glycemic control on metformin monotherapy. Change in HbA1c in group1 was  $-0.656 \pm 0.21\%$  ( $p < 0.0001$ ) whereas in group2 was  $-0.748 \pm 0.35\%$  ( $p < 0.0001$ ). Hence decrease in HbA1c from baseline was more in group2. Both treatments were well tolerated with negligible risk of hypoglycaemia. Weight loss was observed with Sitagliptin in contrast to weight gain seen in Pioglitazone. Conclusion: In this study, Sitagliptin 100 mg along with metformin therapy in comparison to pioglitazone 30 mg plus metformin therapy was both effective, well-tolerated and improved glycemic control in both the groups. Addition of pioglitazone had cause oedema and weight gain to the patients whereas sitagliptin caused weight loss in its patients.

**Keywords :** sitagliptin, pioglitazone, metformin, type 2 diabetes mellitus

**Conference Title :** ICPP 2016 : International Conference on Pharmacy and Pharmacology

**Conference Location :** Bangkok, Thailand

**Conference Dates :** December 12-13, 2016