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## Gliptin therapy in type 2 diabetes in Indian population

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The oral DPP-4 inhibitors (GLIPTIN) are new incretin-based therapies for treatment of type 2 diabetes. The treatment of type 2 diabetes mellitus (T2DM) has included the use of metformin and sulfonylurea (SU) as first-line anti-diabetic therapies throughout the world. Gliptin saxagliptin, sitagliptin & vildagliptin are considered for this study along with two other drugs, metformin and glimiperide. In this 6-month randomized trial, I have taken 1000 patients inadequately controlled with *HbA1C* 7 to 10 patients with type 2 diabetes, who were treated by dual combination of metformin and glimiperide added on 5 mg saxagliptin group or 100 mg sitagliptin group once daily, or 50 mg vildagliptin twice daily for 6 months randomised trial. FBS, 2 hr PPBS & *HbA1C* and hypoglycaemia and other adverse effects were evaluated. After 6 months, *HbA1C* vildagliptin reduced to 1.4, saxagliptin reduced to 1.2 and sitagliptin to 1.1. FBS reduced to 40 to 50 mg/dl with vildagliptin, 30 to 40 mg/dl with saxagliptin and 10 to 20 mg with sitagliptin. 2 hr PPBS with vildagliptin reduced to 60 to 70 mg/dl, with saxagliptin reduced to 40 to 50 mg/dl and with sitagliptin 30 to 50 mg/dl. No serious side effects are seen in any of the medicine.

**Conclusion:** Over 6 months of trial, it shows vildagliptin is best among all and superior to saxagliptin and sitagliptin. Saxagliptin is superior to sitagliptin. Mild hypoglycaemia occurred with all gliptins in few % of patients. Saxagliptin hypoglycaemia was more than vildagliptin. Other side effects include diarrhoea, headache, edema, abdominal discomfort, elevated liver enzymes, and chest discomfort or dyspnoea. Lastly, it is concluded that along with metformin and glimiperide, vildagliptin and others are very helpful for good glycaemic control. Out of all gliptins, vildagliptin is the best.

### Current indications for use of gliptins are:

1. First line in T2DM with  $HbA1c < 7\%$ .
2. Second line as add-on therapy in T2DM patients is one out of the following (metformin, SU, TZD, alfa-glucosidase inhibitor, miglitinide) for uncontrolled T2DM with  $HbA1c > 7\%$ .
3. Third line as add-on therapy in T2DM patients in combination therapy (2 out of the following (metformin, SU, TZD, alfa-glucosidase inhibitor, miglitinide)).

Gliptins have revolutionized the concept of diabetes management and have provided a breath of fresh air to healthcare professionals dealing with diabetes.

### Biography

Premanidhi Panda completed his MBBS from Berhampur University, India and Post-doctoral studies from Utkal University School of Medicine. He is the Director of Dr. Panda Diabetes Institute, India, a premier Diabetes Hospital and Research Centre in India. He worked in Tisco Hospital (India), Benghazi Medical (Libya), and Medwin Hospital. He was awarded with India's Best Doctor Award-2013 by Medgate Today Survey. He was awarded MRCP, FRCP by Royal College of Physician and Surgeon. He published more than 20 papers in reputed journals and received several national and international awards for his contribution in Diabetes.

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