ABSTRACT

THE COMPARATIVE STUDY OF EFFECT OF SITAGLIPTIN AND VILDAGLIPTIN ON GLYCAEMIC CONTROL AND SERUM LIPID LEVEL IN TYPE II DIABETIC MELLITUS PATIENTS IN A RURAL TERTIARY CARE HOSPITAL

BACK GROUND

Diabetes mellitus is a major health problem and increasing cause of morbidity and mortality. The acquired incretin defect leads to increase in glucose level in Type 2 DM patients. Dipeptidy peptidase- 4 inhibitors have a new therapeutic approach in the treatment of T2DM. DPP-4i act by inhibiting the DPP-4 enzymes there by it increases the circulating incretin hormone levels. Sitagliptin was first discovered and approved by FDA in 2006. Sitagliptin 100mg once daily is effective and safer as monotherapy or combined therapy with other oral hypoglycemic agents. Vildagliptin is second selective potent DPP-4 inhibitors approved by FDA in February 2007. Vildagliptin 50 mg once daily or twice daily is found to be effective, safe and well tolerated in patients with T2 DM as mono therapy or in combination therapy with oral hypoglycemic agents.

Aims and Objectives

The aim of my study is to evaluate the comparative effect of sitagliptin and Vildagliptin on glycemic control and lipid profile in Type 2 Diabetes mellitus patients.

Material and Methods

The study was conducted after obtaining institutional ethical clearance from institutional ethical committee, Chennai Medical College hospital and Research centre. Irungalur,

Tiruchirapalli,. The study period was 12 week (from June 2014 to July 2015). Total 180 patients were enrolled in this study after obtaining informed consent. The subjected were randomly divided into six groups and treated with sitagliptin and Vildagliptin in different combinations. Clinical and biochemical parameters were monitored at 0th, 4^{th}, 8^{th} and 12^{th} week of study period.

Results

Sitagliptin and vildagliptin significantly ($P<0.001$) reduces the fasting plasma glucose, postprandial plasma glucose and glycosylated hemoglobin levels. They have therapeutic effect on serum lipid profile by reducing lowdensity lipoprotein and triglycerides at the end of 12^{th} week. Serum amylase levels were found unaltered at the end of 12^{th} week in all the six groups.

Conclusion

Sitagliptin and vildagliptin as combined therapy with metformin or sulfonylurea significantly reduces blood glucose levels. The combination therapy of metformin with Sitagliptin and vildagliptin was found to be very effective in the treatment of Type 2 Diabetes mellitus.

Key words

Diabetes mellitus, DPP-4 inhibitors, Sitagliptin, Vildagliptin incretin defect.