

## Exenatide in the management of diabetes mellitus

**Chandra Kanti Chakraborti**

Kanak Manjari Institute of Pharmaceutical Sciences, India

Exenatide, a glucagon-like peptide-1 (GLP-1) receptor agonist, can effectively control blood glucose levels in type 2 diabetes mellitus (T2DM) without producing serious adverse effects. Moreover, it can reduce body weight of obese T2DM patients. Because of its capacity to delay the further destruction of islet beta-cells, progression of T2DM into type 1 diabetes mellitus is halted or delayed. In addition, due to its multidimensional actions, it can cause improvement in blood pressure and lipid profile along with a reduction of cardiovascular risks observed in T2DM patients. A long-acting formulation of the compound has been developed which would be used once a week, is undergoing clinical trial. This formulation of exenatide once weekly has been found to produce significantly greater improvements in glycemic control than exenatide twice daily, with no increased risk of hypoglycemia, simultaneously maintaining similar reductions in body weight. Moreover, improvement in glycosylated hemoglobin (HbA<sub>1c</sub>) and fasting plasma glucose was significantly greater than exenatide twice daily. Although both treatments were generally well tolerated, the transient mild to moderate nausea was less common with once weekly preparation than that of the twice daily one. Reduction in systolic blood pressure from baseline was observed with both formulations, particularly in hypertensive patients. Beneficial improvements in lipid profile were small. Because of the once per week administration and better beneficial effects with less nausea, greater treatment satisfaction was observed with the once weekly preparation than that of the twice daily one. In therapy, exenatide is considered as an adjunct to metformin/ sulfonylureas/ insulin.

### Biography

After completing M.Pharm. degree from Jadavpur University, Calcutta, India, Dr. C. K. Chakraborti completed his Ph.D. Thesis from the same university. At present, he is a senior Professor of a premier Pharmacy College in Orissa, India. He has published several articles in many reputed journals.

chandrakanti\_12@rediffmail.com