Research in Pharmaceutical Sciences, 2012;7(5)
School of Pharmacy and Pharmaceutical Sciences
Isfahan University of Medical Sciences

Comparison of glycemic excursion in patients with new onset type ii diabetes mellitus before and after treatment with repaglinide.

S. Hezarkhani[1], S. Sedighi[1], M. Aghaei[1], N. Sadat Taheri[2], N. Shahini[3,*], N. Shahini[4]

[1]Department of Internal medicine, Golestan University of Medical Sciences, Gorgan, Iran.
[2]Golestan Research center of Gastroenterology and Hepatology, Golestan University of Medical Sciences, Gorgan, Iran.
[3]Student Research Committee, Golestan University of Medical Sciences, Gorgan, Iran.
[4]Student Research Committee ,Mazandaran University of Medical Sciences

Background and Aims: Due to industrialization and sedentary life, incidence of type 2 diabetes (DM2) is seriously increasing. Repaglinide is a glucose reducing agent that predominantly reduces post-prandial glucose. CGMS monitors blood glucose excursions over a 3-days period.The aim was to determine the blood glucose excursions in patients with new onset DM2.
Methods: 10 patients with new onset DM2, aged between 30-60 years entered this study. As the first therapeutic management, patients received diabetic regimen and moderate exercise for 3-weeks, if they did not achieve blood glucose goal (FBS<120mg/dl, 2hppG<180mg/dl), patients were considered to undergo 3-days CGMS at baseline and after 4-weeks on repaglinide 0.5mg Tid.
Results: Mean age of patients was 45.7±6.46 years. Mean excursions of blood glucose was not different at the onset and end of treatment (6±4.05 VS 7.6±5.2 episodes, P=0.49) and also between mean duration of hypoglycemic episodes before and after therapy (zero VS 5.1±14.1 h, P=0.28).. There was no significant difference between hyperglycemia episodes before and after therapy. (7.6±5.2 VS 5.7±4.1, P=0.42) but mean hyperglycemia duration was significantly reduced at the end of therapy (21±26.17 VS 57.7±35.3, P=0.001). Patients experienced a mean of 0.3±0.67 episodes of hypoglycemia after therapy that showed no significant difference with before it (P=0.19). Mean FBS (with CGMS) after therapy was significantly lower than before it (142.9±54.31 VS 222.9±82.6 P<0.001).
Conclusions: This study demonstrates that repaglinide (with the lowest effective dose and duration) beside CGMS, can reduce FBS significantly and post-prandial BS to target goal, and hypoglycemic events are significantly low. The repaglinide is a safe and effective treatment for new onset diabetic patients and CGMS is an effective adjuvant therapy for control of DM in these patients.

Keywords: Repaglinide; Glycemic excursions; DM2; CGMS