



Service Priorities and Programmes
Electronic Presentations

Convention ID: 335

Submitting author: Ms So Yu MAK

Post title: Resident Pharmacist, Our Lady of Maryknoll Hospital, KWC

A Retrospective Review on the Utilization of Dipeptidyl Peptidase-4 (DPP-4) Inhibitors in a Local Hospital in Hong Kong

Mak SY(1), Franklin P(2), Wong MY(1), Yeung VTF(3), Lau WM(1)

(1) Pharmacy Department, Our Lady of Maryknoll Hospital, (2) Department of Pharmacy, Health & Well-being, University of Sunderland, (3) Department of Medicine and Geriatrics, Our Lady of Maryknoll Hospital

Keywords:

Dipeptidyl Peptidase-4 Inhibitors

Gliptins

Introduction

Sitagliptin, vildagliptin and saxagliptin belong to a new class of oral anti-diabetic drugs, dipeptidyl-peptidase-4 (DPP-4) inhibitors. These are listed as special drugs in Hospital Authority Drug Formulary (HADF) with certain prescribing restrictions. Undertaking drug utilization review would provide more local clinical data regarding the efficacy and tolerability of DPP-4 inhibitors.

Objectives

(1) To evaluate the appropriateness in initiation of sitagliptin, vildagliptin and saxagliptin against HADF operation guideline. (2) To evaluate the efficacy and safety of the drugs.

Methodology

This was a single-centre, retrospective study conducted in Our Lady of Maryknoll Hospital (OLMH). All patients started on vildagliptin, sitagliptin and saxagliptin in OLMH from 1st May to 31st Oct 2012 were included in the review. Subjects on DPP-4 inhibitors were identified by the Clinical Data Analysis and Reporting System (CDARS). The laboratory data and the occurrence of adverse events were retrieved from the clinical management system (CMS). The primary outcome was the difference in mean HbA1c between baseline and post-treatment of DPP-4 inhibitors within 12-24 weeks. Secondary outcomes were the proportion of patients reaching the HbA1c target of <7%, the change in body weight and the occurrence of adverse events.

Result

A satisfactory compliance rate (97%, 94/97) of prescribing DPP-4 inhibitors according to HADF was revealed in this study. However, a low compliance rate (33%, 4/12) to renal dosage adjustment for sitagliptin was revealed. Amongst 83 eligible subjects (i.e. with baseline HbA1c readings), the mean interval of post-treatment HbA1c reading after initiation of DPP-4 inhibitors was 15.4 week. The difference in mean HbA1c between baseline and post-treatment were -0.94 %, -1.01% and -0.58% in sitagliptin, vildagliptin and saxagliptin group respectively (CI 95% 0.24, 0.26 and 0.21; p<0.0001,

<0.0001 and =0.0004 respectively). 20 out of 83 subjects (24%) achieved the HbA1c goal of <7%. DPP-4 inhibitors were associated with slight weight loss (mean change in body weight =0.27kg, $p<0.05$). 7.2% cases (6/83) reported adverse reactions, including dizziness and hypoglycaemia. In short, DPP-4 inhibitors are effective, generally well-tolerated and have favorable weight profile. Prescribers are recommended to consider the use of DPP-4 inhibitors in patients with HbA1c $\geq 7\%$ and <9% after failure of optimal doses of metformin and/or sulphonylurea, with attention to renal dosage adjustment.