Service Priorities and Programmes

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Drug Utilization Evaluation on the appropriate use of Ezetimibe in addition to Statin at Princess Margaret Hospital

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Introduction

In 2014, cardiovascular disease (CVD) was the third leading cause of death in Hong Kong and elevated low-density lipoporotein (LDL) cholesterol has been found to be the main cause of arterial plaque blockage. Despite the use of statin as first line lipid lowering agent to lower LDL-cholesterol, patients with high risk of CVD may still fail to reach their target lipid levels. Ezetimibe has been used in combination with statin to achieve further reduction in LDL-cholesterol levels.

Objectives

To examine the compliance of prescribing ezetimibe in addition to statin according to the Hospital Authority Drug Formulary (HADF) (version 12.2) indications at Princess Margaret Hospital in Hong Kong and also to evaluate the difference in efficacy and safety after the addition of ezetimibe to statin.

Methodology

This was a retrospective, observational study. 350 patients with dispensing record of ezetimibe and statin (atorvastatin, fluvastatin, rosuvastatin or simvastatin) at Princess Margaret Hospital in Hong Kong has been identified between 31 May 2014 to 1 June 2015 using the Clinical Data Analysis Reporting System (CDARS) and the Clinical Management System (CMS). The primary outcome was the compliance rate of prescribing ezetimibe according to the HADF indications. Secondary outcomes were the percentage of patients achieving an LDL-C level of 2.6mmol/L or lower at least 4 weeks after addition of ezetimibe, the difference in LDL-C levels after addition of ezetimibe to existing statin and the incidence of reported adverse events after the addition of ezetimibe to statin.

Result

Three hundred and fifty patients were identified in this study. The compliance rate of prescribing ezetimibe showed that 88% (n=350) cases complied with the HADF indications. Of those 309 patients who complied with the HADF indications, there were 163 patients (High risk dyslipidaemic: 50% (n=156) / Familial hyperlipidaemic: 3% (n=7)) reaching the LDL-cholesterol levels of 2.6mmol/L or lower after the addition of ezetimibe to statin compared to 37 patients (High risk dyslipidaemic: 11% (n=34) /

Familial hyperlipidaemic: 1% (n=3)) before addition of ezetimibe to statin. Addition of ezetimibe to statin demonstrated further reduction in LDL-cholesterol level (ranged from -0.8mmol/L to -1.3mmol/L, $p<0.001$). Adverse events were reported in 10% (n = 32) patients during the 52 weeks follow-up period.