Service Priorities and Programmes

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Retrospective study of the impact of statin therapy modification on the low-density lipoprotein level of patients on oral cyclosporine therapy in Princess Margaret Hospital, Hong Kong

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Introduction

In August 2011, US FDA updated a dosage recommendation of several statins when prescribed together with cyclosporine to manage the clinically significant drug-drug interactions between cyclosporine and statin. This update was incorporated into the local practice.

Objectives

To examine the impact on lipid control of modifying statin therapy in avoidance of potential drug-drug interactions in patients on concomitant cyclosporine and statin therapy; and accordingly, to provide insight on how to better manage dyslipidemia in these patients in future. As a secondary safety endpoint, this study also investigated the change in occurrence of adverse reaction owing to the aforementioned drug-drug interaction.

Methodology

The study was a retrospective study conducted in Princess Margaret Hospital of the Hong Kong Hospital Authority. Patients were recruited by Clinical Date Analysis and Reporting System and data were collected from e-Patient Record system. Primary outcome of the study was defined as the difference in the percentage of patients attaining the LDL target of <=2.6mmol/L before and after the statin regimen modification. Secondary outcome included the absolute change of LDL, total cholesterol and triglycerides level.

Result

With 157 subject analyzed, there was a significant, 12.1% (95% CI, -20.6%, -3.4%, p=0.0066) reduction in the proportion of patients who had achieved the LDL <=2.6mmol/L. For secondary endpoint, t-test showed +0.267mmol/L (95%CI, +0.131, +0.403) and +0.259mmol/L (95%CI, +0.102, +0.417) change for LDL and total

cholesterol before and after regimen modification respectively, with all p values <0.05. For safety endpoint, only one case discontinued treatment due to an increase in creatine kinase and no case of liver failure was reported. Other complaints were mild.The LDL control of these patients was worsened after the statin regimen modification. Both fluvastatin and rosuvastatin were well tolerated with mild side effects experienced.