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Incidence of Muscle Side Effects in Chinese Patients Taking Statins at Princess Margaret Hospital

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Introduction

Statin therapy plays an important role in reducing cardiovascular events. However, statin-associated muscle symptoms such as myalgia, myositis and rhabdomyolysis can lead to non-adherence and discontinuation of drugs. In particular, Chinese patients were reported to have greater risk of developing statin-related muscle symptoms.

Objectives

This study aimed to assess the incidence of myopathy in Chinese patients receiving statin therapy at Princess Margaret Hospital and document the subsequent management of muscle side effects.

Methodology

A retrospective study was conducted. Adult Chinese patients who had follow-up at the cardiology specialist out-patient clinic in Princess Margaret Hospital and received statin treatment from 1st January to 31st December 2014 were identified. Patients who were newly started on atorvastatin, fluvastatin, rosuvastatin and simvastatin, or were already being treated with these four statins prior to the study period were included. The primary outcome of this study was the incidence of statin-associated muscle side effects. The secondary outcomes included a multivariate analysis on risk factors associated with statin myopathy and the report on management of statin-associated muscle side effects.

Result

Two thousand three hundred and three patients were recruited into this study. A total of 58 patients experienced statin-associated muscle side effects. The incidence (per 100 patient-year) of statin-associated muscle side effects was 3.27 (95% CI 2.48–

4.22) and the incidence for myalgia, myositis and rhabdomyolysis were 0.95 (95% CI 0.56–1.53), 2.37 (95% CI 1.66–3.14) and 0 (95% CI 0–0.21) respectively. For patients aged younger than 65 years, the risk of developing statin-associated muscle side effects was two times higher (OR: 2.14, 95% CI 1.18 – 3.86, p=0.0119). The odd ratios for atorvastatin and rosuvastatin over simvastatin were 2.64 (95% CI 1.17–5.96, p=0.0190) and 11.37 (95% CI 4.46 – 29.00, p <0.0001) respectively.