RESULTS

Table 1. Baseline characteristics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Statin monotherapy (n=42,731)</th>
<th>Statin + fibrates (n=3,781)</th>
<th>Statin + CYP3A4 inhibitors (n=7,664)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics, %</td>
<td>Age, years</td>
<td>14.9</td>
<td>17.8</td>
</tr>
<tr>
<td></td>
<td>&lt;45</td>
<td>45-60</td>
<td>&gt;65</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>51.3</td>
<td>&gt;0.01</td>
</tr>
<tr>
<td>Comorbidity, %</td>
<td>Cardiovascular disease</td>
<td>34.7</td>
<td>37.2</td>
</tr>
<tr>
<td></td>
<td>Hyperuricemia</td>
<td>56.8</td>
<td>63.3</td>
</tr>
<tr>
<td></td>
<td>Myocardial infarction</td>
<td>1.5</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>Diabetes mellitus</td>
<td>38.4</td>
<td>48.8</td>
</tr>
<tr>
<td></td>
<td>Kidney disease</td>
<td>15.1</td>
<td>19.1</td>
</tr>
<tr>
<td></td>
<td>Proteinuria</td>
<td>1.2</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>Liver disease</td>
<td>2.1</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td>Viral hepatitis</td>
<td>22.8</td>
<td>33.8</td>
</tr>
<tr>
<td></td>
<td>Cholecystitis</td>
<td>2.3</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>Alcohol and substance abuse</td>
<td>0.9</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>Hypothyroidism</td>
<td>0.8</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>Hypercholesterolemia</td>
<td>0.1</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Results

The laboratory data of liver function tests, creatine kinase, serum creatinine or clinical examination were used to determine the incidence of renal impairment, hepatic injury, acute pancreatitis, or myopathy. Additionally, each of the abovementioned events was examined individually.

Exposure Assessment

Use of statins was categorized into three groups based on the concomitant use of the interacting drugs during follow-up period.

1. Statin alone
2. Statin + fibrates
3. Statin + CYP3A4 inhibitors

Statistical Analysis

Poisson regressions were used to estimate the individual incidences (events per 10,000 person-years) and the incidence rate ratios (IRRs) of the hospitalization events for the combined therapies versus statin monotherapy.

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Table 2. Incidence rate ratios for statin-associated adverse events

<table>
<thead>
<tr>
<th>Event/Year</th>
<th>IRR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renal impairment</td>
<td>2.28</td>
<td>(1.05-4.96)</td>
</tr>
<tr>
<td>Hepatic injury</td>
<td>2.28</td>
<td>(1.04-4.98)</td>
</tr>
<tr>
<td>Acute pancreatitis</td>
<td>2.28</td>
<td>(1.04-4.98)</td>
</tr>
<tr>
<td>Myopathy</td>
<td>2.28</td>
<td>(1.04-4.98)</td>
</tr>
</tbody>
</table>

Methods

A retrospective cohort study design was employed with data retrieved from the Taiwan National Health Insurance Research Database between 01/01/2000 and 12/31/2007.

This study aimed to estimate the incidence rates of hospitalizations for statin-associated AEs in statin initiators, and to further evaluate the incidence of the concomitant use of fibrates or CYP3A4 inhibitors on the risk of statin-related AEs.

Study cohort comprised all patients newly treated with statin; therefore, the study cohort included all patients with at least one record of statin prescriptions during one year preceding the cohort entry date.

Follow-up Period

The study cohort was followed from the cohort entry date until discontinuation of statin use, combination with or switch to a different statin, occurrence of statin-related AE, or the end of study period (12/31/2007), whichever came first.

Outcome Definition

The outcomes of interest were a composite of statin-associated hospitalizations for renal impairment, hepatic injury, acute pancreatitis, or myopathy. Additionally, each of the abovementioned events was examined individually.

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