Background

The Sufentanil Sublingual Tablet 30 mcg (SST 30 mcg; DSUVIA®) was recently approved by the U.S. Food and Drug Administration for the management of acute pain in adults severe enough to require an opioid analgesic and for which alternative treatments are inadequate. SST 30 mcg is administered only by a healthcare practitioner, with use restricted to certified medically supervised settings such as hospitals, surgical centers and emergency departments. Safety data from over 800 clinical study patients, ranging in age from 18 to 86, was used to support product approval, yet elderly patients require special consideration given the potential for pharmacokinetic and pharmacodynamic changes common to this age group. The objective of this analysis was to evaluate the pooled safety data by age group from clinical studies of the sufentanil sublingual tablet administered at 30 mcg dose equivalents in both postoperative and emergency department patients.

Methods

Study Design

• One study was randomized and placebo controlled in abdominal surgery patients (SAP301); two studies were single-arm and open-label intended to evaluate SST 30 mcg in the ED (SAP302) and in older, post-operative patients with comorbidities (SAP303).

Methods (Cont)

Study Design

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Efficacy Assessments

• Primary efficacy variable for all studies was the time-weighted summed pain intensity difference to baseline over the 12 (SPID12) or 1-hour study period (SPID1).

Safety Assessments

• Safety assessments included spontaneously reported adverse events (AEs), vital signs including oxygen saturation and lab values.

A subgroup analysis by age group (< 65 years, ≥ 65 to < 75 years and ≥ 75 years) was performed on all SST 30 mcg patients, in addition to a subset of patients from SST 15 mcg studies where patients received a second dose of SST 15 mcg within 20–25 min of the first (representing a 30-mcg dose-equivalent).

Results

Baseline Demographics and Patient Disposition

• 804 patients were evaluated in the pooled safety analysis, including 646 that received active drug.

• Of the patients exposed to SST 30 mcg, 448 were < 65 years, 126 were ≥ 65 to < 75 years and 72 were ≥ 75 years.

• Select demographics and baseline characteristics are presented in Table 1.

Safety

• AEs in general were mild to moderate in severity and tended to increase with age.

• Table 2 includes the most common AEs observed by age cohort.

Results (Cont)

Table 2. Most Common AEs in Patients Exposed to SST 30 mcg or SST 15 mcg

<table>
<thead>
<tr>
<th>Adverse Event, %</th>
<th>SST 30 mcg N=159</th>
<th>SST 15 mcg N=159</th>
<th>SST 30 mcg N=108</th>
<th>SST 15 mcg N=158</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nausea</strong></td>
<td>24.9</td>
<td>45.3</td>
<td>30.8</td>
<td>50.0</td>
</tr>
<tr>
<td><strong>Headache</strong></td>
<td>9.3</td>
<td>16.4</td>
<td>7.7</td>
<td>5.0</td>
</tr>
<tr>
<td><strong>Vomiting</strong></td>
<td>3.8</td>
<td>10.7</td>
<td>3.8</td>
<td>18.0</td>
</tr>
<tr>
<td><strong>Dizziness</strong></td>
<td>2.8</td>
<td>6.3</td>
<td>19.2</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Hypotension</strong></td>
<td>2.4</td>
<td>6.9</td>
<td>3.8</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Pruritus</strong></td>
<td>2.1</td>
<td>8.8</td>
<td>3.8</td>
<td>8.0</td>
</tr>
<tr>
<td><strong>Somnolence</strong></td>
<td>1.7</td>
<td>0.6</td>
<td>3.8</td>
<td>2.0</td>
</tr>
</tbody>
</table>

**Conclusion**

• SST has shown benefit across a range of patient ages as a non-invasive analgesic modality for short-term management of acute pain.

• The overall rate of adverse events tended to increase with age with the exception of headache, hypotension and pruritus.

• While the elderly should always be monitored closely, results from these late-phase studies suggest that SST well-tolerated in this population.

References

1. DSUVIA Prescribing Information, November 2018

Disclaimer: 1) SST 15 mcg is an investigational drug 2) Financial support was provided by AcelRx for all studies.

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