Literature Surveillance for Pharmacovigilance; Tools and Systems for Driving Efficiency

Panel Discussion led by:
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Adverse drug reactions have a major impact on public health

- 5% of all hospital admissions in EU are related to adverse drug reactions
- 28% of patients visit emergency department of hospital due to adverse events
- Nearly 197,000 deaths per year due to adverse drug reactions
- ADR’s are 4th Leading Cause of death in US hospitals
- High societal costs: $75 Billion per year
Why searching scientific and medical literature?

‘…Scientific and medical literature is a significant source of information for the monitoring of the safety profile and of the risk benefit balance of medicinal products, particularly in relation to the detection of new safety signals or emerging safety issues…

Reference: Guideline on good pharmacovigilance practices (GVP): Module VI-Management and reporting of adverse events to medicinal products
Signal from literature: Tamsulosin and ‘Floppy Iris Syndrome’ (2005)

- Intraoperative floppy iris syndrome occurred in approximately 2% of a cataract surgery population
- Appeared to be caused by tamsulosin, a systemic sympathetic alpha-1A antagonist
- Chang et al. mention 15 patients with IFIS
- At the time of publication, none had been reported to the Regulatory Authorities!
Safety information from spontaneous and literature adverse reactions reports differ

Reporting rates may differ depending on the type of adverse reaction reported

<table>
<thead>
<tr>
<th>Drug Substance</th>
<th>System Organ Class</th>
<th>Literature Cases (%)</th>
<th>Spontaneous Cases (%)</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetylsalicylic Acid</td>
<td>Nervous System Disorders</td>
<td>25.6</td>
<td>8</td>
<td>17.6</td>
</tr>
<tr>
<td></td>
<td>Gastrointestinal Disorders</td>
<td>8.4</td>
<td>25.4</td>
<td>17.0</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>Injury, poisoning, complications</td>
<td>35.9</td>
<td>7.5</td>
<td>28.3</td>
</tr>
<tr>
<td>Alendronic acid</td>
<td>Gastrointestinal disorders</td>
<td>4.6</td>
<td>21.0</td>
<td>16.5</td>
</tr>
<tr>
<td></td>
<td>Injury, poisoning, complications</td>
<td>28.3</td>
<td>5.4</td>
<td>22.9</td>
</tr>
<tr>
<td>Tamsulosin</td>
<td>Injury, poisoning, complications</td>
<td>50</td>
<td>4.1</td>
<td>45.9</td>
</tr>
<tr>
<td>Etoposide</td>
<td>Congenital, familial, genetic</td>
<td>0</td>
<td>24.3</td>
<td>24.3</td>
</tr>
</tbody>
</table>

Extracted from Table 4

Literature surveillance as a component of the PV workflow


4/16/17
Many of the challenges we hear about fall in these categories:

- Complying with different regulations
- Monitoring the increasing volume of literature
- Building ideal search strategies
- Preparing for inspections and audits
- Monitoring local language journals
- Integrating EMA MLM results
Guidelines for literature screening may differ between authorities
Increased regulatory focus on role of literature in PV

VI.B.1.1.2. Literature reports
The scientific and medical literature is a significant source of information for the monitoring of the safety profile and of the risk benefit balance of medicinal products, particularly in relation to the detection of new safety signals or emerging safety issues. Marketing authorization holders are therefore expected to maintain awareness of possible publications through a systematic literature review of widely used reference databases (e.g. Medline, Excerpta Medica or Embase) no less frequently than once a week. The marketing authorization holder should ensure that the literature review includes the use of reference databases that contain the largest reference of articles in relation to the medicinal product properties.

A. Good reporting Practice
Spontaneous case reports of adverse events submitted to the sponsor and FDA, and reports from other sources, such as the medical literature or clinical studies, may generate signals of adverse effects of drugs. The quality of the reports is critical for appropriate evaluation of the relationship between the product and adverse events. FDA recommends that sponsors make a reasonable attempt to obtain complete information for case assessment during initial contacts and subsequent follow-up, especially for serious events, and encourages sponsors to used train...

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Our Panelists

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