**INTRODUCTION**

The Forensic Toxicology Service at St. George’s - University of London investigated 95 cases of alleged DFSA between March 2007 and January 2009. A total of 90 urine and 52 blood samples were received from police forces on behalf of Cellmark Forensic Services. Of the complainants 86% were female and the mean age was 24 years. Alcohol or drugs were detected in 69% of cases. Alcohol was detected in 54% of cases at a mean concentration of 161mg/dL (n=48) in urine and 74mg/dL (n=13) in blood. A drug was detected in 40% of cases and two or more drugs (excluding metabolites and suspected adulterants) in 20% of cases. Illicit drugs were the most frequently detected (n=25), the most common being cannabis (n=18), followed by cannabis (n=10). The most commonly detected medicinal drugs were flunitrazepam (Rohypnol®) and GHB (gammahydroxybutyrate) as portrayed in the media, were not detected in any cases, but ketamine was detected in one case. Vital evidence in these cases may have been lost due to delayed presentation, but these findings suggest that alcohol, and not drugs, appears to pose the biggest "date rape" risk.

**BARRIERS TO SUCCESSFUL PROSECUTION**

Under reporting
Delayed reporting
Contradictory evidence – ‘he says / she says’
Victim does not pursue case
Undermining credibility / victim blame
Suspect not identified / caught
Long delays in court proceedings

Only 5.3% (1 in 20) of reported rapes in the UK resulted in a conviction in 2004.

**ATTITUDES TO RAPE RESPONSIBILITY**

<table>
<thead>
<tr>
<th></th>
<th>Partially responsible</th>
<th>Totally responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Woman failed to say ‘no’ clearly</td>
<td>53%</td>
<td>8%</td>
</tr>
<tr>
<td>Woman behaviour in flirtatious manner</td>
<td>28%</td>
<td>6%</td>
</tr>
<tr>
<td>Woman is drunk</td>
<td>26%</td>
<td>4%</td>
</tr>
<tr>
<td>Woman wearing sexy/revealing clothing</td>
<td>20%</td>
<td>6%</td>
</tr>
<tr>
<td>Woman has had many sexual partners</td>
<td>14%</td>
<td>8%</td>
</tr>
<tr>
<td>Woman is alone in dangerous/deserted area</td>
<td>17%</td>
<td>0%</td>
</tr>
</tbody>
</table>

**CHALLENGES FOR THE TOXICOLOGIST**

- Therapeutic drugs
- High potency / active at low doses
- Short half life / detection window
- Complicated by metabolism
- Chemical instability
- Poor response to immunoassay
- Amnesic effect
- Delayed presentation
- Complainant may have used alcohol or recreational drugs

Negative results may mean that no drugs were used, the time interval between the incident and sample collection was so long any drug had been eliminated, the methods used may not have been sensitive enough to detect a drug still present in the drug was not one being targeted by the analyst.

**ROHYPNOL®**

Rohypnol® was discontinued in the UK in March 2004 and the licence expired in August 2004. However it is still available in other countries in Europe including Austria, Belgium, Cyprus, Denmark, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Norway, Portugal and Spain.

The manufacturer has responded to concerns regarding its potential use in drink spiking, by colouring and film coating the tablet to make it slower to dissolve and increasing its visibility. When dissolved in liquid it releases particulates and a bright blue colour.

**CONCLUSION**

DFSA is a problem. Its prevalence is badly documented because data are difficult to collect. There is often significant delay in the victim presenting to the police after the event, the histories are vague and incomplete, there is a wide range of drugs of potential interest, and the analysis and interpretation of findings is complex.