were 6 cases where a positive 3 hour delta occurred with a 2 hour delta of 3 or less. 4 had values exceeding the 99th percentile on the admission sample so would have been retained for further investigation. The remaining 4 patients had co-existing clinical conditions that required further investigation.

**Conclusion** The routine use of serial sampling at admission and 2 hours was clinically safe and resulted in the same clinical decisions in the context of the busy ED environment for the population served by the hospital.

**Method and Design** Data from a period of 12-months (1065 cases) were used to evaluate the performance of a TUB tool used in an English ambulance service. Data were sourced from the Trauma Audit and Research Network (TARN) and ED records and case reviews were performed to extract the required information. Statistical analysis was performed to evaluate the accuracy of the tool in identifying major trauma, defined as an Injury Severity Score (ISS) greater than 15. Further analysis was undertaken to make recommendations for alterations to the tool.

**Results and Conclusion** The sensitivity of the Wessex TUB is 51.3% and the specificity is 71.3% which makes the tool a poor predictor of major trauma. The tool could be improved by altering thresholds for vital signs (blood pressure and Glasgow Coma Scale) and by providing clarity around the injury findings.

This study provides the first full evaluation of this tool in clinical practice and makes some recommendations to improve performance. This could lead to more accurate identification of patients who have suffered major trauma and ensure they are transported to an appropriate specialist centre. However, it was identified that ISS>15 may not be the most useful outcome measure and it is recommended that a new definition is developed which more accurately describes need for MTC input.

**1337 EVALUATION OF A TRAUMA UNIT BYPASS TOOL IN PREDICTING MAJOR TRAUMA**

Els Freshwater. University Hospital Southampton

10.1136/ememermed-2022-RCEM2.43

**Aims, Objectives and Background** In order to direct patients to specialist Major Trauma Centres (MTCs), triage is performed at the scene of an incident to evaluate the extent of a patient’s injuries. The most severely injured patients are then transported directly to an MTC, even if there is a closer ED. This process is known as ‘Trauma Unit Bypass’ (TUB) and decision support tools are provided for use by ambulance service providers. This study aims to evaluate a tool in current operational use and suggest amendments which may improve its performance in clinical practice.

**Method and Design** Data from a period of 12-months (1065 cases) were used to evaluate the performance of a TUB tool used in an English ambulance service. Data were sourced from the Trauma Audit and Research Network (TARN) and ED records and case reviews were performed to extract the required information. Statistical analysis was performed to evaluate the accuracy of the tool in identifying major trauma, defined as an Injury Severity Score (ISS) greater than 15. Further analysis was undertaken to make recommendations for alterations to the tool.

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This study provides the first full evaluation of this tool in clinical practice and makes some recommendations to improve performance. This could lead to more accurate identification of patients who have suffered major trauma and ensure they are transported to an appropriate specialist centre. However, it was identified that ISS>15 may not be the most useful outcome measure and it is recommended that a new definition is developed which more accurately describes need for MTC input.

**1718 ANOTHER CT AORTOGRAPH REQUEST? A 1 YEAR RETROSPECTIVE CASE NOTE REVIEW OF ALL ED-REQUESTED CT AORTOGRAMS**

Shahab Manoudeshri, Sarah Wilson, Françoise Tioehurst. Wexham Park Hospital, Frimley Health NHS Foundation Trust

10.1136/ememermed-2022-RCEM2.45

**Aims, Objectives and Background** Acute aortic pathologies have a high mortality rate and can be difficult to diagnose in the Emergency Department (ED). We wanted to know what our local positive diagnosis rate was from ED-requested CT aortograms (CTA).

**Method and Design** The radiology department provided a list of all CTA requested by ED in a single year (2019). A retrospective notes review was conducted using the ED notes to identify diagnoses of acute aortic pathology and other positive diagnoses. Our ED saw approximately 90,000 adult patients in 2019.

**Results and Conclusion** 201 CTA were requested by ED in a single year (2019).

5 (2.4%) scans diagnosed acute aortic syndrome (AAS), with an additional 3 scans that identified thoracic aortic aneurysm without AAS. 13 (6.5%) abdominal aortic aneurysms were identified of which 2 had ruptured.
A 10-YEAR REVIEW OF INSULIN-RELATED ENQUIRIES TO THE UK NATIONAL POISONS INFORMATION SERVICE (NPIS)

1Emma Moyns,1 Robin Ferner, 1Sandlands Euan,2 Laurence Gray, 2Ruben Thanacoody, 1Sally Bradberry. 1National Poisons Information Service (NPIS) Birmingham Unit; 2National Poisons Information Service (NPIS) Cardiff Unit

Aims, Objectives and Background More than 4.9 million people in the UK have diabetes, and sufferers are at increased risk of depression.1 We reviewed enquiries to the NPIS about insulin overdose.

Method and Design Retrospective analysis of enquiries between 1 November 2011 and 31 October 2021.

Results and Conclusion We received 1195 enquiries involving insulin. Further analysis was limited to the 169 enquiries involving insulin only (90.5% via injection).

Most enquiries (88%) concerned adults ≥18 years. There were 34 non-diabetic and 98 diabetic patients: 32 Type 1, 10 Type 2, and 56 type undocumented. Exposures were intentional (n=114, 68%), from therapeutic error (n=28), accidental (n=16) or circumstances unknown (n=11).

Long-acting insulins were involved in 71 cases, and the highest dose was 20000 units (table 1). The lowest recorded blood glucose concentration (mmol/L) at the time of the enquiry was in the range 0–0.9 (n=7), 1.0–1.9 (n=29), 2.0–2.9 (n=25), 3.0–3.9 (n=12), >4.0 (n=14). Hypokalaemia (defined as K <3.5 mmol/L) was noted in 26 (n=15%) enquiries. The maximum Poisoning Severity was (n=162) was graded: none (n=55), minor (n=29), moderate (n=44), and severe (n=34).

Treatments given prior to contacting the NPIS were IV glucose (n=91, 54%), IV/IM glucagon (n=26, 15%), IV octreotide (n=6, 4%) and IV corticosteroids (n=2, 1%). No patient underwent surgical excision of the injection site. Long-acting insulins accounted for 5/6 cases where octreotide was given.

Conclusions Hypoglycaemia following insulin overdose was mostly managed satisfactorily by intravenous glucose infusion, with glucagon used occasionally. The role of octreotide and corticosteroids was unclear. Approximately 20% of cases were severe, especially following overdose of medium- and long-acting insulins; we recorded no fatalities.

REFERENCES

Abstract 1455 Table 1 Details of dose, insulin type, nadir blood glucose concentration, and Poisoning Severity Score in 169 cases of insulin poisoning reported to the UK National Poisons Information Service in the ten years to 31 October 2021. Ø = unrecordable

<table>
<thead>
<tr>
<th>Insulin type*</th>
<th>Median dose Units</th>
<th>Lowest blood glucoseconc&lt;sup&gt;c&lt;/sup&gt; mmol/L (mg/dL)</th>
<th>Known diabetic patients</th>
<th>Maximum poisoning severity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(range)</td>
<td></td>
<td></td>
<td>Moderate n % of all moderate</td>
</tr>
<tr>
<td>Long acting (N=71)</td>
<td>600 (10–20000)</td>
<td>Ø</td>
<td>49</td>
<td>23</td>
</tr>
<tr>
<td>Medium acting (N=24)</td>
<td>900 (60–4500)</td>
<td>0.6 (11)</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>Short acting (N=14)</td>
<td>75 (28–2000)</td>
<td>1.6 (29)</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Ultrashort acting (N=35)</td>
<td>180 (1.5–4800)</td>
<td>1 (18)</td>
<td>23</td>
<td>10</td>
</tr>
<tr>
<td>Unknown (N=18)</td>
<td>188 (45–400)</td>
<td>Ø</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Canine (N=7)</td>
<td>20 (7–1600)</td>
<td>4.2 (76)</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

*Where two or more insulin types or mixtures were involved (n=55, 32.5%), the longest-acting component was counted.