ABDOMINAL PANCREATITIS

- The pancreas is a mostly retroperitoneal organ with both endocrine (metabolic) and exocrine (digestive) functions.
- It receives blood supply from branches of the SMA (head) and splenic artery (body & tail)
- Acute pancreatitis is caused by auto-digestion by exocrine enzymes

- Exact pathogenic process is not fully understood but is related to either outflow obstruction e.g. gallstones, or hyperstimulation e.g. drugs/tobacco.
- Exocrine enzymes initially cause parenchymal oedema, followed by peripancreatic fat necrosis.
- In severe cases there may be pancreatic parenchymal necrosis and/or pancreatic haemorrhage.
- The inflammatory processes can lead to SIRS response.

**Signs & Symptoms**

- Epigastric pain - colicky, often radiating to the back
- Vomiting
- Pyrexia
- Abdominal tenderness & guarding
- If obstructive the patient may be jaundiced

- Cullen’s sign (periumbilical bruising)
- Grey Turner’s sign (flank bruising)

**Severity**

Acute pancreatitis is divided into mild and severe

Glasgow Scoring System predicts severity.

A Score >2 indicates likely severe acute pancreatitis

<table>
<thead>
<tr>
<th>P</th>
<th>PaO2</th>
<th>&lt;7.9kPa</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Age</td>
<td>&gt;55 years</td>
</tr>
<tr>
<td>N</td>
<td>Neutrophilia (WCC)</td>
<td>&gt;15 x10⁹/L</td>
</tr>
<tr>
<td>C</td>
<td>Calcium</td>
<td>&lt;2 mmol/L</td>
</tr>
<tr>
<td>R</td>
<td>Renal UREA</td>
<td>&gt;16 mmol/L</td>
</tr>
<tr>
<td>E</td>
<td>Enzymes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LDH</td>
<td>&gt;600iu/L</td>
</tr>
<tr>
<td></td>
<td>AST</td>
<td>&gt;200iu/L</td>
</tr>
<tr>
<td>A</td>
<td>Albumin</td>
<td>&lt;32g/L</td>
</tr>
<tr>
<td>S</td>
<td>Sugar (Glucose)</td>
<td>&gt;10 mmol/L</td>
</tr>
</tbody>
</table>

**Cause**

The most common causes in Scotland are Alcohol followed by Gallstones.

Causes can be remembered by the mnemonic GET SMASHED:

G Gal Stones
E Ethanol
T Trauma
S Steroids
M Mumps
A Autoimmune
S Scorpion sting (Androctonus species)
H Hyperlipidaemia
E ERCP
D Drugs e.g. Sodium valproate, Azathioprine

**Management** is mainly supportive with analgesia and IV fluids.

Antibiotics are considered if there is evidence of pancreatic necrosis or haemorrhage on CT.