Aims

To ensure that all team members are familiar with available treatment options for upper GI haemorrhage.

Background

Early, aggressive management and specific triage of significant upper GI bleeding is required to achieve optimum outcome. The EMRS bases this SOP on SIGN 105 (Sept 2008) Management of acute upper and lower Gastrointestinal bleeding. www.sign.ac.uk/guidelines/fulltext/105/index.html

In 2007 a UK audit showed overall mortality from acute gastrointestinal bleeding was 7%.

Application

Retrieval doctors
SAS Paramedics
Rural healthcare practitioners

Patients appropriate for retrieval team activation

Patients with Upper GI (UGI) Haemorrhage who are haemodynamically unstable or have a Rockall score ≥2.

Consider taking blood products, iStat analyser and Sengstaken tube in addition to standard medical equipment pack.
Advice to GP prior to team arrival
- Hi Flow O2
- Establish 2 large (16G) bore IV cannulae
- Resuscitate using hypotensive resuscitation principles
- Administer blood transfusion if available and appropriate
- Initiate treatment with Terlipressin (Glypressin™) if available and appropriate (suspected variceal bleeds only – see dose and notes below)
- Urinary catheter
- PPI’s should not be used pre-endoscopy

Rockall Score

<table>
<thead>
<tr>
<th>Variable</th>
<th>Score</th>
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<tbody>
<tr>
<td>Age</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>&lt;60</td>
</tr>
<tr>
<td>Shock</td>
<td>No shock</td>
</tr>
<tr>
<td>Comorbidity</td>
<td>None</td>
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Medical management on scene:
Initially, resuscitate the patient according to hypotensive resuscitation principles. Consider early protection of the airway by RSI in cases of:
(i) Severe uncontrolled variceal bleeding;
(ii) Severe encephalopathy resulting in reduced GCS;
(iii) Inability to maintain oxygen saturation above 90%;
(iv) Aspiration Pneumonia

Resuscitate with crystalloid and blood products (FFP/Cryo/Blood/Platelets) as necessary.

The ultimate aim is to transport these patients to a centre capable of diagnostic and therapeutic endoscopy. Referral should be made early. Endoscopy will provide band ligation and/or injection sclerotherapy.
Depending on the resources in the referring centre the following steps may be useful:

1. **Suspected Variceal UGI bleed**: Initiate Terlipressin (*Glypressin™*) Dose: By intravenous injection, 2 mg followed by 1 or 2 mg every 4 to 6 hours until bleeding is controlled, for up to 72 hours. [Terlipressin is a synthetic analogue of vasopressin which reduces portal blood flow, portal systemic collateral blood flow, and variceal pressure. Both however have significant systemic side effects such as an increase in peripheral resistance, and reduction in cardiac output, heart rate, and coronary blood flow.]

2. NGT aspirate blood from stomach (Caution in suspected variceal bleed)

3. Consider I.V. Ceftriaxone 1gm in those with chronic liver disease

4. Consider Sengstaken tube insertion if presumed exanguinating variceal bleed
   - Patients with a Sengstaken tube may need definitive airway protection
   - Inflate the gastric balloon first
   - Only inflate the oesophageal balloon if ongoing haemorrhage despite gastric balloon inflation

   See *SOP-oesophagogastric tamponade tube* for full instructions

**Triage Destination**

Patients should go to a facility with 24 hour endoscopy service capable of band ligation / sclerotherapy and ICU bed available if required. Consider patient transfer to SGH for emergency endoscopy (all unstable patients are managed by the receiving surgical team whereas the GI team have a 2-patient slot for non-emergency patients every morning).