Management Guidelines for Haematemesis and/or Melaena 2004

1. Initial assessment and treatment

All patient should be routinely clerked and examined: a haematemesis/melaena clerking sheet available to facilitate this. Copies are available on the MAU and on the Medicine website.

An initial Rockall score (mortality risk assessment) should be calculated for each patient (details are on the clerking sheet and are separately available on the hospital Medicine website.

Rectal examination is essential for the assessment of a patient with haematemesis or melaena, to confirm the presence of melaena, identify fresh (smelly & tarry) melaena and to differentiate from fresh rectal bleeding. Occult blood testing rarely changes management.

At least one large bore intravenous cannula (grey or brown venflon) should be inserted and blood cross matched/transfused as necessary. Guidelines to likely blood requirement are given on the haematemesis/melaena assessment sheet and on the next page.

Monitoring of pulse and BP should be done on arrival, repeated within 1hr and then as clinically appropriate. As a general rule the interval between measurements should be halved if the pulse is higher or the BP lower than the previous recording. Likewise, the interval can be doubled if the pulse is lower and BP the same or higher than the previous recording until an interval of 4hrs is reached in stable patients.

Acid suppression drugs (H2 receptor antagonists/proton pump inhibitors) are of no benefit in the acute management of upper alimentary bleeding and should therefore be withheld until after the endoscopy and only then prescribed if appropriate (e.g. for a documented ulcer).

Tranexamic acid may be of value in patients at high risk of death (Rockall score ≥ 3) and a confirmed peptic ulcer.

Contra-indications: ischaemic arterial disorders

inflammatory conditions (suggested by raised platelet count)

Dose: 1g iv t.d.s. for three days.
2. Blood cross match requirements

Sufficient blood should be available to resuscitate the patient and to cater for a rebleed.

Some patients simply require a group and save.

**Cross match 4 units** if there is any of:
- Initial Rockall score ≥2 (in patients under 60 years of age) or ≥3 (in patients over 60 years of age)
- Fresh melaena on rectal examination
- Postural hypertention >15mm Hg
- Clinical shock (syst. BP <100mmHg)

**Cross match 6 units** if there is suspected variceal bleeding

**Otherwise** group and save

As a general rule, any patient with an upper GI bleed and a tachycardia >100bpm should have a transfusion started.

Following endoscopy, if there is a peptic ulcer with stigmata of recent haemorrhage (SRH) or variceal bleeding request that the blood bank retains blood for 48 hours.

3. Endoscopy

Endoscopy follows resuscitation, usually on the morning following admission. Emergency endoscopy can be requested in working hours (from 7.30am) through the endoscopy secretary (tel 21466) or by contacting the duty endoscopist through switchboard. The on-call surgical registrar should be contacted before an out-of-hours endoscopy, if transfusion is required, or if the Rockall score is >=3.

Patients must be fully informed about the risks and benefits of endoscopy as well as the possible need for (and risks of) laparotomy should this prove necessary. Discussions with the patient must be fully documented in the notes and appropriate consent forms signed. This is essential prior to endoscopy, because it is impossible to gain appropriate consent directly after endoscopy should surgery be necessary.

**Indications for emergency endoscopy** (including weekends):
- Suspected continued bleeding
- Patients who rebleed before routine OGD can be performed
- Patients being considered for surgery

Patients with aortic grafts and GI bleeding have an aorto-enteric fistula until proven otherwise. Urgent abdominal CT and endoscopy are usually indicated.
Location of out of hours endoscopy

- Patients in A&E: resus room in A&E
- Patients on MAU: resus room on MAU
- Patients expected to proceed directly to surgery (eg rebleed in hospital, exsanguinating haemorrhage): in theatre by arrangement with surgeons
- Other patients: side room on 5F

Emergency endoscopy may rarely need to be performed on other wards, such as CCU if a patient has a GI bleed after thrombolysis. In these circumstances, a separate SHO should be recruited with sole responsibility for monitoring the cardiac rhythm. Emergency endoscopy should not be performed in the endoscopy unit, since this is isolated from additional support should problems arise during or after endoscopy.

Equipment, staff and support

The mobile trolley and clean endoscope should be ready in the corridor of the endoscopy unit. Keys for the unit are kept on 5F.

- **Check** that drugs (including adrenaline/ethanolamine) are on board, that there is a mouth guard, that the washbottle is filled with sterile water, that there is an injection needle, variceal bander, biopsy forceps, a cleaning brush and ‘blue button’ to flush the scope after the procedure.

- **Ask the ward** to get an extra suction apparatus by the bed (one for the patient’s airway, one for the scope), oxygen and mask, gloves and apron, 2/5/10ml syringes and needles for drawing up drugs and a bucket of warm soapy water.

**Drugs** are kept in the Pharmacy bag in the drugs’ cupboard in endoscopy room 3. Keys for the drugs’ cupboard are on 5F. Fentanyl and pethidine are available and judicious use of fentanyl often makes emergency endoscopy easier: after use, the CD drugs book must be signed and returned with remaining drugs to the drugs’ cupboard.

**Staff to assist with the endoscopy** are recruited from the ward and medical team. There are currently no endoscopy nursing staff on call. The endoscopist is ultimately responsible for the safety of the patient. From a clinical governance point of view there must be three trained staff available for the endoscopy:

- the endoscopist
- a staff nurse (from ward 5F or the ward sending the patient)
- another staff member (staff nurse, or SHO, or house officer)

Emergency endoscopy should not be performed unless these minimum staffing levels are met.

IF THERE IS ANY DIFFICULTY IN OBTAINING STAFF OR AGREEING THE LOCATION OF ENDOSCOPY, CALL THE CONSULTANT GASTROENTEROLOGIST

Two suction apparatuses are essential, one for the patient’s airway and one for the scope.

Supplemental oxygen and oximeter are essential, using pre-oxygenaton before sedation. Flumazenil and naloxone should be immediately available.
If the airway is compromised before sedation (eg continuing haematemesis and cardiorespiratory disease), then call an anaesthetist for support

**After the procedure**

Full instructions for basic cleaning of the scope are on a laminated sheet on the endoscopy trolley and must be followed. Non-endoscopy staff should not, however, use the cleaning machines.

Record the procedure in the book (kept in the drugs bag)

Sign and return the controlled drugs book

**Reports**

Endoscopists should state the important findings legibly in their reports. They should also comment on the presence or not of the important **stigmata of recent haemorrhage**, as dictated in the Rockall criteria (see assessment sheet).

- If an **adherent clot** is seen in a peptic ulcer there is a 20% chance of rebleed.
- If a **visible vessel** is seen in a peptic ulcer there is up to a 50% chance of rebleeding.
- If neither of the above is found then the chance of rebleeding is <10%
- 30% of patients with suspected upper alimentary bleeds will have a normal endoscopy

**Injection therapy** at endoscopy substantially reduces the risk of rebleeding but does not abolish it completely. It should be carried out by an experienced endoscopist.

**4. Indications for insertion of C.V.P. cannula and urinary catheter**

- hypotensive on admission and age over 60 years
- rebleed
- if transfusion requirements exceed 4 units
- accompanying severe cardiorespiratory or renal disease
- initial Rockall score ≥2 (in patient under 60 years of age) or ≥3 (in patients over 60 years of age)

In all these circumstances it is appropriate to consider CVP insertion, but if in the judgement of the clinician other risks (such as inexperienced staff) exceed the benefit of CVP measurement, then this should be documented in the notes.

**Frequency of CVP measurement:**

- on insertion, then as an arbitrary guide:
- half hourly if the pulse >100 and sBP <100,
- hourly if pulse >100 and systolic BP >100mmHg,
- otherwise 4hrly, unless otherwise specified.
5. Diagnosis of rebleeding

This can be difficult, however the following are highly suggestive:

- Overt fresh haematemesis or melaena
- Tachycardia of >100 with a drop of systolic BP to <90 mm Hg
- Tachycardia of >100 with a fall in CVP
- Fall in Hb of more than 2g/dl, over a period of 24 hours or less

6. Indications for surgery

Early surgery, especially in older patients, is associated with a lower overall mortality.

The on-call surgical registrar should be contacted for:

- all patients requiring transfusion
- patients needing out of hours endoscopy
- or those with an initial Rockall score >3 (predicted mortality 11%)

unless the admitting consultant has made a decision that surgery is inappropriate.

Surgery is indicated for

**Age under 60**  
Transfusion requirements of more than 8 units in 24 hours  
**or** one rebleed  
**or** spurting vessel at endoscopy not controlled by injection therapy  
**or** continued bleeding

**Age over 60**  
Transfusion requirements of more than 4 units in 24 hours  
**or** one rebleed  
**or** spurting vessel at endoscopy not controlled by injection therapy  
**or** continued bleeding

A decision not to operate if the criteria are met should only be taken by the consultant surgeon and physician.

7. Variceal bleeding

Definitive therapy for bleeding oesophageal varices is injection sclerotherapy or endoscopic banding. Therapeutic endoscopy should be repeated at 24-48 hrs (for injection sclerotherapy) or at 5-7 days (for banding), and then at 1-2 week intervals until the varices are obliterated. Other important aspects of management:

- Correct **coagulation** if possible. (Do not give FFP unless they also need volume replacement as it may precipitate a variceal bleed in a normovolaemic patient.)
- Treat/prevent **encephalopathy** (phosphate enema twice daily)
- Avoid sedation

**Indications for Sengstaken (Blakemore) tube:**

- Variceal bleeding uncontrolled by endoscopy
- Bleeding gastric varices
- Re-bleed pending re-injection of varices
Drugs to lower portal pressure:

**Terlipressin** (Glypressin)

2 mg iv followed by 2mg iv 4 hourly for 48 hours

is effective in reducing portal pressure, preventing recurrent variceal bleeding and reducing mortality.

These guidelines are valid until **March 2006** when they will be reviewed. The contribution of Dr Dermot McGovern, Consultant Physicians, clinical registrars, research fellows, ward nursing and endoscopy staff is greatly appreciated.

Professor Derek Jewell  
Dr Roger Chapman  
Dr Jane Collier  
Dr Simon Travis  

25 February 2004
Haematemesis & Melaena Clerking Sheet

NAME: (label)  

Date ……………………… 

Time ……………………… 

Initial Rockall Score

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
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<tbody>
<tr>
<td>0</td>
<td>AGE &lt;60 years</td>
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<tr>
<td>1</td>
<td>60-79 yrs</td>
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<td>2</td>
<td>&gt;80 yrs</td>
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SHOCK

<table>
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<th>Description</th>
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<tr>
<td>1</td>
<td>Pulse&lt;100</td>
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<td>1</td>
<td>Syst BP&gt;100</td>
</tr>
<tr>
<td>2</td>
<td>Syst BP&lt;100</td>
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CO-MORBIDITY

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<th>Description</th>
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</thead>
<tbody>
<tr>
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<td>None</td>
</tr>
<tr>
<td>2</td>
<td>Cardiac failure, IHD or any major co-morbidity</td>
</tr>
<tr>
<td>3</td>
<td>Renal/liver failure, or disseminated malignancy</td>
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Initial Rockall score (Max score 7) 

Full score after OGD

ENDOSCOPIC DIAGNOSIS

M-W tear*, no lesion seen and no SRH*  

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<tr>
<th>Score</th>
<th>Description</th>
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<tbody>
<tr>
<td>0</td>
<td>All other diagnoses</td>
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<tr>
<td>1</td>
<td>Malignancy of upper GI tract</td>
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MAJOR SRH*

None or dark spot only  

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<th>Score</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>Blood in upper GI tract, adherent clot, visible or spurting vessel</td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Final Rockall score (Max score 11)

*M-W tear Mallory-Weiss tear  

SRH: Stigmata of Recent Haemorrhage
Haematemesis & Melaena Clerking Sheet

Patient name: _______________________

RESULTS

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<thead>
<tr>
<th></th>
<th>Admission</th>
<th>Day 1</th>
<th>Day 2</th>
<th>OGD Result (summary)</th>
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<tbody>
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<td></td>
<td></td>
<td></td>
<td>Including diagnosis &amp; stigmata of recent haemorrhage</td>
</tr>
<tr>
<td>Hb</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MCV</td>
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<tr>
<td>WBC</td>
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<td></td>
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<tr>
<td>Na</td>
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<td></td>
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<tr>
<td>K</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Urea</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creatinine</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>INR</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Albumin</td>
<td></td>
<td></td>
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<tr>
<td>Bilirubin</td>
<td></td>
<td></td>
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</tbody>
</table>

RESUSCITATION

Insert large bore cannula (grey or brown venflon) immediately

Cross match 4 units for: Fresh melaena on PR
Cross match 6 units for: Suspected variceal bleeding
Postural hypotension >15 mmHg
Systolic BP<100 mmHg

Otherwise Group & Save serum only

Initial Rockall score of ≥ 3 then:

Insert CVP line
Give haemaccel/gelofusine whilst waiting for blood if shocked
Consider insertion of urinary catheter
Inform on-call surgical team

Indications for Surgery

Age under 60 years
Transfusion requirements > 8 units in 24 hours
or Two rebleeds
or Spurting vessel at OGD not controlled by injection therapy
or Continued bleeding

Age over 60 years
Transfusion requirements > 4 units in 24 hours
or One rebleed
or Spurting vessel at OGD not controlled by injection therapy
or Continued bleeding

Predicted Mortality

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<tr>
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<td>Score</td>
<td>Score</td>
</tr>
<tr>
<td></td>
<td>Pre-endoscopy</td>
<td>Post-endoscopy</td>
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<tr>
<td>0</td>
<td>0.2%</td>
<td>0.0%</td>
</tr>
<tr>
<td>1</td>
<td>2.4%</td>
<td>0.0%</td>
</tr>
<tr>
<td>2</td>
<td>5.6%</td>
<td>0.2%</td>
</tr>
<tr>
<td>3</td>
<td>11.0%</td>
<td>2.9%</td>
</tr>
<tr>
<td>4</td>
<td>24.6%</td>
<td>5.3%</td>
</tr>
<tr>
<td>5</td>
<td>39.6%</td>
<td>10.8%</td>
</tr>
<tr>
<td>6</td>
<td>48.9%</td>
<td>17.3%</td>
</tr>
<tr>
<td>7</td>
<td>50.0%</td>
<td>27.0%</td>
</tr>
<tr>
<td>8+</td>
<td>-</td>
<td>41.1%</td>
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Refs
Rockall TA et al Gut 1996; 38:316-21

H&M Clerking Sheet March 2004