Gastrointestinal Bleeding - Upper GIT

Gastrointestinal bleeding in children is a relatively common presentation to emergency departments.

This guideline looks at upper GIT causes of bleeding. Please refer to Gastrointestinal Bleeding - Lower GIT for lower GIT causes.

Background

- Most causes of upper GIT bleeding in children are self limiting conditions
- In the rare event of a life threatening upper GIT bleed, urgent IV access (large bore) and resuscitation is paramount (see Serious Illness)
- Small, self limiting GIT bleeds rarely need extensive investigation

General

Upper GIT bleeding typically presents with:

- Haematemesis - frank blood or coffee ground
- Malaena

Assessment
**Haemodynamically unstable, shocked or persistent large bleeding**

- Pallor, tachycardia, delayed perfusion, hypotension
  - Large bore IV access x2
  - Fluid resuscitation 20ml/kg 0.9% saline (repeat as necessary)
  - +/- Blood transfusion
  - Early senior clinician input

**Haemodynamically Stable Patients**

- Consider non GIT causes of blood
  - Swallowed blood – maternal (breastfed infants), epistaxis, oral/dental injury, haemoptysis
  - Food which can mimic blood – tomato, food colouring, beetroot
- Thorough history will help determine the source of bleeding

**History**

Important points to ask in history:

- Neonates – was vitamin K given at birth?
- Non Steroidal Anti Inflammatory Drug use
- Ingestion – button battery, caustic chemicals
- Chronic liver disease
- Cystic Fibrosis
- Family history of bleeding disorders, inflammatory bowel disease, peptic ulcer disease

**Differential Diagnoses**

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>History</th>
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</thead>
<tbody>
<tr>
<td>Swallowed blood</td>
<td>Maternal blood, epistaxis, post oral / dental procedures</td>
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<tr>
<td>Mallory Weiss Tear</td>
<td>Forceful vomiting</td>
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<tr>
<td>Oesophagitis</td>
<td>Reflux symptoms</td>
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<tr>
<td>Gastritis</td>
<td>Epigastric pain, NSAID use, Helicobacter pylori</td>
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<tr>
<td>Mucosal injury</td>
<td>Ingestion – button battery, caustic chemical</td>
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<tr>
<td>Oesophageal varices</td>
<td>Chronic liver disease, portal hypertension</td>
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<tr>
<td>Vascular malformation</td>
<td>Uncommon – may be cutaneous vascular malformations</td>
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</tbody>
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Investigations

- Minor self-limiting upper GI bleeds rarely require investigation and parental reassurance is all that is necessary.
- Investigation of significant upper GI bleeds should be guided by suspected underlying cause.

Lab tests:

- Full blood count
- Coagulation profile
- Group and hold or cross match
- Liver function tests
- APT-Downey test – differentiates adult haemoglobin (swallowed maternal blood) from foetal haemoglobin

Endoscopy

- Significant upper GI bleeds and mucosal injury should be referred to gastroenterology for endoscopy
- Urgent gastroenterology referral is required for patients with:
  - Haemodynamic instability
  - Active bleeding
  - Oesophageal varices
  - Button battery in oesophagus

Management

### Significant Bleeding

- Large bore IV access x2
- Fluid resuscitation +/- blood transfusion as necessary
- Correct any clotting abnormalities – vitamin K, FFP, platelets
- Urgent gastroenterology referral
- Medications:
  - Proton pump inhibitor – omeprazole / pantoprazole
  - Octreotide (in variceal bleeds – on gastroenterology advice)
- Uncontrolled variceal bleeding may require ballon tamponade with Foley’s catheter or Sengstaken-Blakemore tube
- **All** patients with significant upper GI bleeds should be admitted for observation and further management/investigation

### Mucosal Injury (post ingestion)
• Button batteries lodged in the oesophagus require urgent endoscopic removal – refer urgently to gastroenterology
• Button batteries in the stomach > 48 hours should be referred to gastroenterology for endoscopic removal
• Caustic chemical ingestion should be discussed with gastroenterology especially if difficulty swallowing or excessive drooling

Gastritis / Oesophagitis

• Patients with an acute self-limiting bleed may benefit from acid suppression (H2 antagonist or proton pump inhibitor) for 2-4 weeks
• Consider gastroenterology follow up if chronic or recurrent symptoms

References

Fleisher, Gary R.; Ludwig, Stephen; Textbook of Pediatric Emergency Medicine, 6th Edition. 2010