LRI Emergency Department and Children's Hospital

Management of Upper Gastrointestinal Bleeding in Children

Staff relevant to:	Medical & Nursing staff working within UHL children's Hospital & Emergency Department
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Reviewed by:	H Dagash
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1. Introduction and Who Guideline applies to

Upper gastrointestinal (UGI) bleeding in children poses a challenge to paediatricians and paediatric surgeons. Significant bleeding is associated with increased morbidity and mortality. Nationally there are no established guidelines for the initial as well as subsequent management of upper gastrointestinal bleeding in children. Most of the data used in literature published on this subject are extrapolated from adult work.

The following guideline applies to all medical staff when they consider the management of upper gastrointestinal bleeding in children within the Children's Hospital or in the Paediatric Emergency Department.

Contents

Related documents;

Basic Life Support or Choking UHL Childrens Hospital Guideline

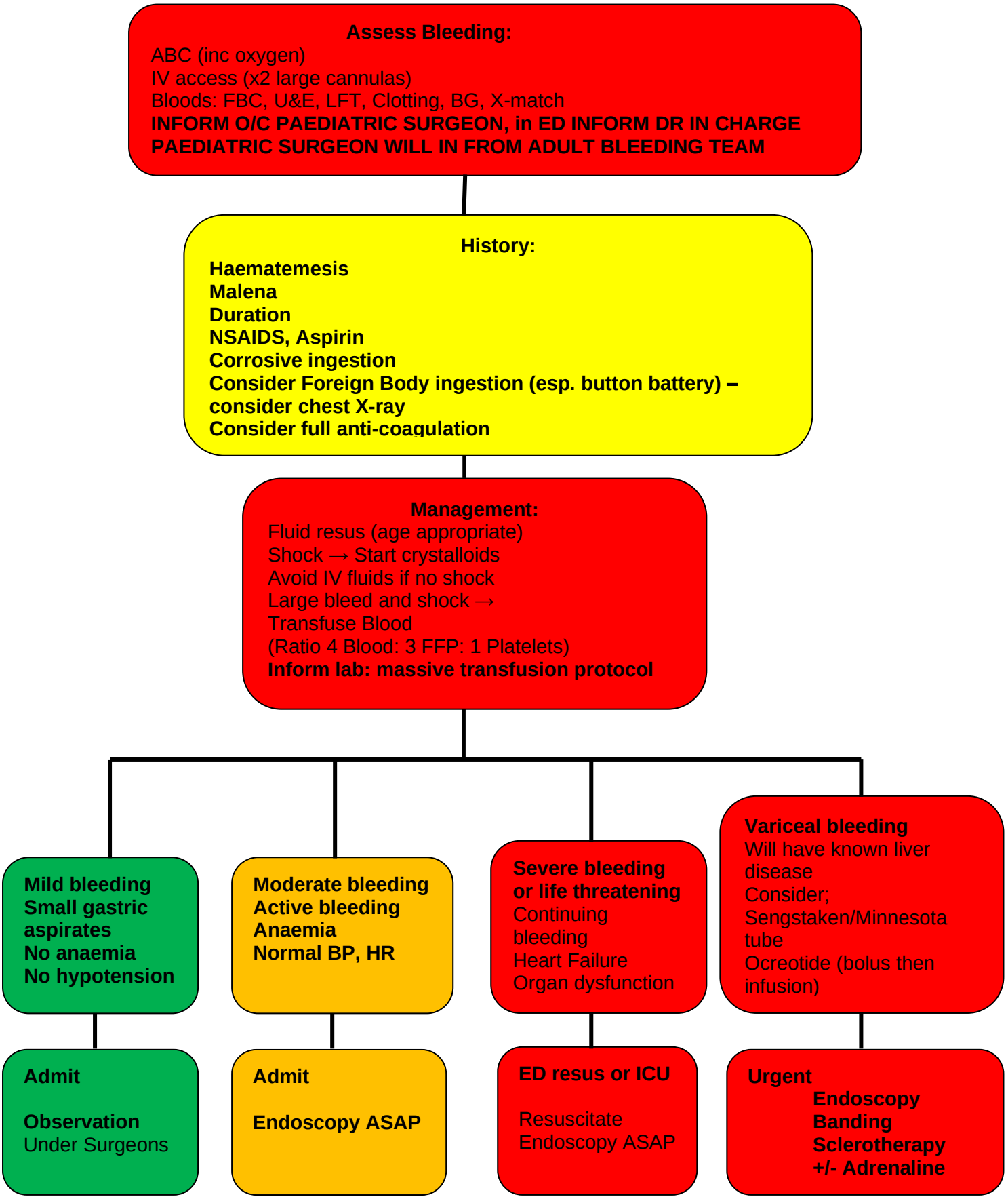
Button Battery Ingestion UHL Childrens Hospital Guideline

Foreign Body Ingestion UHL Paediatric Emergency Department Guideline

Massive Haemorrhage UHL Guideline

Fluid Electrolyte Management UHL Childrens Hospital Guideline

Upper GI Bleed Management Flow Chart


Assess Bleeding:
ABC (inc oxygen)
IV access (x2 large cannulas)
Bloods: FBC, U&E, LFT, Clotting, BG, X-match
INFORM O/C PAEDIATRIC SURGEON, in ED INFORM DR IN CHARGE
PAEDIATRIC SURGEON WILL IN FROM ADULT BLEEDING TEAM
History:
Haematemesis
Malena
Duration
NSAIDS, Aspirin
Corrosive ingestion
Consider Foreign Body ingestion (esp. button battery) – consider chest X-ray
Consider full anti-coagulation
Management:
Fluid resus (age appropriate)
Shock → Start crystalloids
Avoid IV fluids if no shock
Large bleed and shock →
Transfuse Blood
(Ratio 4 Blood: 3 FFP: 1 Platelets)
Inform lab: massive transfusion protocol
Mild bleeding
Small gastric aspirates
No anaemia
No hypotension
Moderate bleeding
Active bleeding
Anaemia
Normal BP, HR
Severe bleeding or life threatening
Continuing bleeding
Heart Failure
Organ dysfunction
Variceal bleeding
Will have known liver disease
Consider;
Sengstaken/Minnesota tube
Ocreotide (bolus then infusion)
Admit
Observation
Under Surgeons
Admit
Endoscopy ASAP
ED resus or ICU
Resuscitate
Endoscopy ASAP
Urgent
Endoscopy
Banding
Sclerotherapy
+/- Adrenaline

2. Guidance:

2.1 Initial Assessment

- Is it haematemesis?
- Is it malaena?
- Is patient on NSAID or Aspirin therapy?
- Has there been history of corrosive ingestion?
- Could the child have swallowed a foreign body (FB)?

Remember there may be no knowledge of FB. Consider Chest X-Ray if no obvious cause of GI haemorrhage.
For guidance regarding foreign body ingestion please see:
C145/2016 Foreign Body Ingestion UHL Paediatric Emergency Department Guideline
C210/2016 Button Battery Ingestion UHL Paediatric Emergency Department Guideline

2.2 Identify high risk patients

- Active ongoing bleeding
- Are varices a potential cause?
- Past Medical History: liver, heart, renal failure, congenital heart disease, coagulopathy
- Hb <8 g/dl
- Shock: Tachycardia, Poor perfusion, acidosis, drowsy or hypotensive

2.3 Urgent investigations

- Immediate venous gas to assess pH, lactate, base excess and haematocrit
- FBC
- U&E
- LFT
- Clotting profile
- X-match (2-4 units if severe bleeding)
- CXR + AXR: History suggestive of Foreign Body (FB) Ingestion
  Or No History of FB but <2 years to exclude FB e.g. Button battery**.**

2.4 Resuscitation

- **Activate Major Haemorrhage Protocol**
- After dealing with Airway and breathing site 2 Large bore cannulae
- Give fluid as per APLS guideline for Haemorrhage: 10ml/kg aliquots up to 40ml/kg then blood
- Aim for normal blood pressure; do not haemodilute if no clear indication for IV fluids, use blood ASAP if hypotensive (not crystalloid)
- Remember to give platelets FFP and Cryoprecipitate in significant haemorrhage. Activate the UHL Massive Haemorrhage Protocol in these cases to improve speed of product delivery.
- Tranexamic Acid Infusion should be considered in all age groups (15mg/kg up to a maximum of 1g as per RCPCH trauma protocol)
- Insert large bore NGT (**DO NOT LAVAGE WITH ICE WATER**)

Inform on call paediatric surgical SpR or Consultant and if patient of concern, involve ED and PICU consultants early on if life threatening or unable to transfer.

Discuss all admissions with the gastroenterology team as soon as possible (there is no 24 hour gastroenterology cover).

2.5 Pharmacological management

• Pre-endoscopic Proton Pump Inhibitors should always be used, but should not delay Endoscopy

i. Omeprazole IV – refer to CH IV monograph for dosing information – begin at the higher 1mg/kg/dose (max 40mg) OD
ii. Oral Omeprazole can be used for longer term management post-acute episode

• **DO NOT USE RANITIDINE, AS INEFFECTIVE IN REDUCING REBLEEDING OR MORTALITY**

• Octreotide should be started **as soon as varices suspected or if unsure about source of bleeding**, continued 3-5 days post endoscopy

i. Octreotide IV – Continuous infusion 1 microgram/kg/hour, higher doses may be required initially, when no active bleeding reduce dose over 24 hours; Usual maximum 50 micrograms/hour.

2.6 Endoscopic management

• Early endoscopy (after stabilisation) in cases of severe or life threatening UGI bleeding (see flow chart)
• Endoscopy within 24 hours for other cases
• Consider calling adult bleed rota team during life-threatening haemorrhage
• For cases where an ulcer is bleeding at endoscopy: clips, thermocoagulation, sclerosant or foam should be used alone or in combination with 1 in 10,000 strength adrenaline injection
• For variceal bleeding endoscopy within 12 hours to make diagnosis and treatment using sclerotherapy or banding
• Patients with bleeding ulcers should be tested for H. pylori and receive eradication therapy
• Have Sengstaken tube available

2.7 Surgical management

- Consider 2nd endoscopy in cases who re-bleed or failed therapy at first Endoscopy.
- In unstable patients or bleeding uncontrolled after endoscopy, discuss with radiologist need for CT Angio and or Intervention.

THIS SHOULD BE CONSULTANT DECISION

- Consider surgery if there is continuous bleeding

2.8 Foreign Bodies

In all scenarios below, check for total **duration** of symptoms and consider CT scan if > than 3 days.

- **Coins**
  - o Upper oesophagus on initial X ray: contact ENT for removal
  - o Lower oesophagus on initial X ray: repeat XR at 6-12 hours after ingestion and remove if still in oesophagus. If in stomach on 2nd X-ray removal not indicated.
- **Button batteries**
  - o Anywhere in oesophagus on initial X-ray, remove (ENT for Upper, Gen Surgery for Lower)
  - o In stomach on initial X-ray, Repeat XR after 6-12 hours after ingestion. If still present, in stomach remove. If beyond stomach no action needed
- **Magnets; as for batteries above**
- **Sharp metallic objects**
  - o In oesophagus, remove
  - o In stomach, will usually pass spontaneously

3. Education and Training

No specific training required. Awareness raised in Children's Hospital Clinical Governance Half-day (Apr 2013) and in M&M discussions.

4. Monitoring Compliance

What will be measured to monitor compliance	How will compliance be monitored	Monitoring Lead	Frequency	Reporting arrangements
Use of X Rays and Imaging	Audit of Incident Reports	Mr A Rajimwale	Annually	Children's Hospital and Paeds ED Audit and Governance meetings where Actions required and lessons to be disseminated will also be identified
Resuscitation and Escalation	Audit of Incident Reports	Dr R Rowlands	Annually	

5. Supporting References

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6. Key Words

Bleeding, Children, Gastrointestinal, GI, Haemorrhage, Upper,

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The Trust recognises the diversity of the local community it serves. Our aim therefore is to provide a safe environment free from discrimination and treat all individuals fairly with dignity and appropriately according to their needs.
As part of its development, this policy and its impact on equality have been reviewed and no detriment was identified.

CONTACT AND REVIEW DETAILS	
Guideline Lead (Name and Title) H. Dagash - Consultant	**Executive Lead** Chief Medical Officer
Details of Changes made during review: **Added related documents** **Clarified which team to admit under.** **Added activate major haemorrhage protocol** **Clarified normal BP & HR to manage as moderate bleed** **Added consider full anticoagulation to history review**	