Gastrointestinal bleeding: the management of acute upper gastrointestinal bleeding

NICE guideline

Draft for consultation, December 2011

If you wish to comment on this version of the guideline, please be aware that all the supporting information and evidence is contained in the full version.

Contents

Introduction

Acute upper gastrointestinal bleeding is a common medical emergency that has a 10% hospital mortality rate. Despite changes in management, mortality has not significantly improved over the past 50 years.

Elderly patients and people with chronic medical diseases withstand acute upper gastrointestinal bleeding less well than younger, fitter patients, and have a higher risk of death. Almost all people who develop acute upper gastrointestinal bleeding are treated in hospital and the guideline therefore focuses on hospital care. The most important causes are peptic ulcer and oesophago-gastric varices.

Endoscopy is the primary diagnostic investigation in patients with acute upper gastrointestinal bleeding but it has not always been clear whether urgent endoscopy is cost effective as well as clinically valuable. Endoscopy aids diagnosis, yields information that helps predict outcome and, most importantly, facilitates treatments that can stop bleeding and reduce the risk of re-bleeding.

Drugs may have a complementary role in reducing gastric acid secretion and portal vein pressure. Not every patient responds to endoscopic and drug treatments; emergency surgery and a range of radiological procedures may be needed to control bleeding.

A guideline is needed to show which diagnostic and therapeutic steps are of use in managing the condition, and to stimulate hospitals to develop a structure that enables clinical teams to deliver the optimum service.

The guideline will assume that prescribers will use a drug’s summary of product characteristics to inform decisions made with individual patients.

Patient-centred care

This guideline offers best practice advice on the care of adults and young people aged 16 years and older with acute variceal and non-variceal upper gastrointestinal bleeding.

Treatment and care should take into account patients' needs, preferences and religious beliefs. People with acute upper gastrointestinal bleeding should have the opportunity to make informed decisions about their care and treatment, in partnership with their healthcare professionals. If patients do not have the capacity to make decisions, healthcare professionals should follow the Department of Health's advice on consent (available from www.dh.gov.uk/en/DH_103643) and the code of practice that accompanies the Mental Capacity Act (available from www.dh.gov.uk/en/SocialCare/Deliveringsocialcare/MentalCapacity). In Wales, healthcare professionals should follow advice on consent from the Welsh Assembly Government (available from www.wales.nhs.uk/consent). In taking account of patients' religious beliefs in the context of blood transfusion, healthcare professionals should follow the advice from UK Blood Transfusion and Tissue Transplantation Services (available from http://www.transfusionguidelines.org.uk/index.aspx).

Good communication between healthcare professionals and patients is essential. It should be supported by evidence-based written information tailored to the patient's needs. Treatment and care, and the information patients are given about it, should be culturally appropriate. It should also be accessible to people with additional needs such as physical, sensory or learning disabilities, and to people who do not speak or read English.

If the patient agrees, families and carers should have the opportunity to be involved in decisions about treatment and care.

Families and carers should also be given the information and support they need.

Key priorities for implementation

The following recommendations have been identified as priorities for implementation.

Assessing risk

- Use the following formal risk assessment scores for all patients with acute upper gastrointestinal bleeding:
  - the clinical Rockall score or Blatchford score at first assessment
  - the full Rockall score after endoscopy.

Initial management

- Do not offer blood transfusion to patients with acute upper gastrointestinal bleeding who have a haemoglobin level of more than 0.8 g/litre, unless there is another indication for transfusion.

Timing of endoscopy

- Perform urgent endoscopy in unstable patients with severe acute upper gastrointestinal bleeding.
- Offer endoscopy within 24 hours of admission to patients with upper gastrointestinal bleeding. Units seeing more than 330 cases a year should offer daily endoscopy lists. Units seeing fewer than 330 cases should choose between daily endoscopy lists and alternative strategies (such as networks) according to local circumstances.

Managing non-variceal upper gastrointestinal bleeding

- For the endoscopic treatment of non-variceal upper gastrointestinal bleeding, use adrenaline injection combined with one of the following:
  - a mechanical method (such as clips)
  - thermal coagulation
  - fibrin or thrombin.

- Offer interventional radiology if it is promptly available to patients who re-bleed despite endoscopic treatment. Refer urgently for surgery if interventional radiology is not available.

Managing variceal upper gastrointestinal bleeding

- Consider using transjugular intrahepatic portosystemic shunts (TIPS) for oesophageal, gastric or ectopic variceal bleeding if initial endoscopic treatment has not controlled upper gastrointestinal bleeding.
- Offer prophylactic antibiotic therapy at presentation to patients with suspected or confirmed variceal bleeding.

Controlling bleeding and preventing re-bleeding in patients with suspected or confirmed variceal bleeding

- Continue low-dose aspirin for secondary prevention of vascular events in patients with upper gastrointestinal bleeding in whom haemostasis has been achieved.

1 Guidance

The following guidance is based on the best available evidence. The full guideline ([hyperlink to be added for final publication]) gives details of the methods and the evidence used to develop the guidance.

1.1 Assessing risk

1.1.1 Use the following formal risk assessment scores for all patients with acute upper gastrointestinal bleeding:

- the clinical Rockall score or Blatchford score at first assessment
- the full Rockall score after endoscopy.

1.1.2 Consider patients with a pre-endoscopy Rockall or Blatchford score of 0 for early discharge.

1.2 Initial management

Blood products

1.2.1 Do not offer blood transfusion to patients with acute upper gastrointestinal bleeding who have a haemoglobin level of more than 0.8 g/litre, unless there is another indication for transfusion.

1.2.2 Do not offer platelet transfusion to patients who are not actively bleeding and who are haemodynamically stable.

1.2.3 Do not use recombinant factor VIIa in patients with upper gastrointestinal bleeding except when all other methods have failed.

Patients with massive and/or ongoing bleeding

1.2.4 Transfuse patients with massive bleeding[1] with blood, platelets and clotting factors in line with the local protocols[2] for managing massive bleeding.

1.2.5 Offer platelet transfusion to patients with ongoing upper gastrointestinal bleeding and a platelet count of less than 50×10^9/litre.

Fresh frozen plasma for patients with upper gastrointestinal bleeding not related to liver disease

1.2.6 Offer fresh frozen plasma to patients with upper gastrointestinal bleeding and no underlying liver disease who have either:

- fibrinogen level of less than 1 g/litre or
- prothrombin time (international normalised ratio) (PT INT) or activated partial thromboplastin time (APTT) greater than 1.5 times normal.

Patients who are taking warfarin

1.2.7 Offer prothrombin complex concentrate to patients who are taking warfarin and actively bleeding.

1.2.8 Treat patients with upper gastrointestinal bleeding who are taking warfarin and have stopped bleeding in line with existing local warfarin protocols.

Terlipressin

1.2.9 Offer terlipressin to patients with suspected variceal bleeding when they first present. Stop treatment after 5 days or after definitive

[1] In the acute care setting massive bleeding may be defined as a 50% blood volume loss within 3 hours or a rate of loss of 150 ml per minute.

[2] A local protocol is an Emergency Blood Management Plan for every hospital and provides guidance on clinical priorities for the use of large volumes of blood components. It includes guidance on the sequence of components, laboratory tests, blood bank arrangements and monitoring.

haemostasis has been achieved, unless there is another indication for its use.[3]

1.3 Timing of endoscopy

1.3.1 Perform urgent endoscopy in unstable patients with severe acute upper gastrointestinal bleeding.

1.3.2 Offer endoscopy within 24 hours of admission to patients with upper gastrointestinal bleeding. Units seeing more than 330 cases a year should offer daily endoscopy lists. Units seeing fewer than 330 cases should choose between daily endoscopy lists and alternative strategies (such as networks) according to local circumstances.

1.4 Managing non-variceal bleeding

Combination treatments

1.4.1 For the endoscopic treatment of non-variceal upper gastrointestinal bleeding, use adrenaline injection combined with one of the following:

- a mechanical method (such as clips)
- thermal coagulation
- fibrin or thrombin.

Proton pump inhibitors

1.4.2 Do not offer acid suppression drugs (proton pump inhibitors or H2-receptor antagonists) before endoscopy to patients with suspected non-variceal upper gastrointestinal bleeding.

[3] At the time of publication, terlipressin is indicated for the treatment of bleeding from oesophageal varices, with a maximum duration of treatment of 72 hours (3 days). Prescribers should consult the relevant summary of product characteristics. Informed consent for off-label use of terlipressin should be obtained and documented.

1.4.3 Offer proton pump inhibitors to patients with non-variceal upper gastrointestinal bleeding and stigmata of recent haemorrhage shown at endoscopy.

Treatment after first or failed endoscopic treatment

1.4.4 Consider second endoscopy, with treatment as appropriate, in all patients at high risk of re-bleeding, particularly if there is doubt about adequate endoscopic haemostasis at the first endoscopy.

1.4.5 Offer a repeat endoscopy to patients who re-bleed with a view to further endoscopic treatment or emergency surgery.

1.4.6 Offer interventional radiology if it is promptly available to patients who re-bleed despite endoscopic treatment. Refer urgently for surgery if interventional radiology is not available.

1.5 Managing variceal bleeding

Band ligation

1.5.1 Use band ligation in patients with upper gastrointestinal bleeding caused by oesophageal varices.

Transjugular intrahepatic portosystemic shunts and endoscopic treatment

1.5.2 Offer endoscopic injection of N-butyl-2-cyanoacrylate for the initial treatment of upper gastrointestinal bleeding from gastric varices.

1.5.3 Offer transjugular intrahepatic portosystemic shunts if bleeding from gastric varices is not controlled by endoscopic injection of N-butyl-2-cyanoacrylate.

1.5.4 Consider using transjugular intrahepatic portosystemic shunts (TIPS) for oesophageal, gastric or ectopic variceal bleeding if initial endoscopic treatment has not controlled upper gastrointestinal bleeding.

Antibiotics

1.5.5 Offer prophylactic antibiotic therapy at presentation to patients with suspected or confirmed variceal bleeding.

1.6 Primary prophylaxis

1.6.1 Offer acid suppression therapy (H2-receptor antagonists or proton pump inhibitors) for primary prevention of upper gastrointestinal bleeding in acutely ill patients admitted to high dependency or intensive care units. If possible use the oral form of the drug.

1.6.2 Review the ongoing need for acid suppression drugs for primary prevention of upper gastrointestinal bleeding in acutely ill patients when they recover or are discharged from high dependency or intensive care units.

1.7 Controlling bleeding and preventing re-bleeding

1.7.1 Stop non-steroidal anti-inflammatory drugs during the acute phase in patients presenting with upper gastrointestinal bleeding.

1.7.2 Continue low-dose aspirin for secondary prevention of vascular events in patients with upper gastrointestinal bleeding in whom haemostasis has been achieved.

1.7.3 Discuss the risks and benefits of continuing clopidogrel in patients with upper gastrointestinal bleeding with the appropriate specialist (for example, a cardiologist or a stroke specialist) and with the patient.

1.8 Information and support for patients and carers

1.8.1 Establish good communication between clinical staff and patients and their family and carers at the time of presentation, throughout their time in hospital and following discharge. This should include:

- giving verbal information that is recorded in medical records

- different members of clinical teams providing consistent information
- providing written information as appropriate
- ensuring patients and their families and carers receive the same information.

2 Notes on the scope of the guidance

NICE guidelines are developed in accordance with a scope that defines what the guideline will and will not cover. The scope of this guideline is available from http://guidance.nice.org.uk/CG/Wave21/1/Scoping.

The guideline covers

- Adults and young people (16 years and older) who have acute variceal and non-variceal upper gastrointestinal bleeding, or who are in high dependency and intensive care units and at high risk of acute upper gastrointestinal bleeding.
- Primary prophylaxis in high dependency and intensive care units.
- Assessment of risks, including the use of scoring systems.
- Initial management.
- Timing of endoscopy.
- Management of variceal and non-variceal upper gastrointestinal bleeding.
- Information and support for patients and carers.

The guideline does not cover

- Chronic bleeding.
- Children (15 years and younger).
- Bleeding lower than the duodenum.
- Treatment for Helicobacter pylori.

How this guideline was developed

NICE commissioned the National Clinical Guideline Centre to develop this guideline. The Centre established a Guideline Development Group (see appendix A), which reviewed the evidence and developed the recommendations. An independent Guideline Review Panel oversaw the development of the guideline (see appendix B).

There is more information about how NICE clinical guidelines are developed on the NICE website (www.nice.org.uk/HowWeWork). A booklet, 'How NICE clinical guidelines are developed: an overview for stakeholders, the public and the NHS' (fourth edition, published 2009), is available from NICE publications (phone 0845 003 7783 or email publications@nice.org.uk and quote reference N1739).

3 Implementation

NICE has developed tools to help organisations implement this guidance (see www.nice.org.uk/guidance/CG[XX])'.

4 Other versions of this guideline

4.1 Full guideline

The full guideline, 'The management of acute upper gastrointestinal bleeding' contains details of the methods and evidence used to develop the guideline. It is published by the National Clinical Guideline Centre, and is available from our website (www.nice.org.uk/guidance/CG[XX]/Guidance). **Note: these details will apply to the published full guideline.**

4.2 'Understanding NICE guidance'

A summary for patients and carers ('Understanding NICE guidance') is available from www.nice.org.uk/guidance/CG[XX]/PublicInfo

For printed copies, phone NICE publications on 0845 003 7783 or email publications@nice.org.uk (quote reference number N[XXXX]). **Note: these details will apply when the guideline is published.**

We encourage NHS and voluntary sector organisations to use text from this booklet in their own information about upper gastrointestinal bleeding.

5 Related NICE guidance

- Stent insertion for bleeding oesophageal varices. NICE interventional procedure guidance 392 (2011).
- Alcohol use disorders: physical complications. NICE clinical guideline 100.
- Unstable angina and NSTEMI. NICE clinical guideline 94 (2010).
- Prevention of cardiovascular disease. NICE public health guidance 24 (2010).
- Stroke. NICE clinical guideline 68 (2008).
- Osteoarthritis. NICE clinical guideline 59 (2008).
- Acutely ill patients in hospital. NICE clinical guideline 50 (2007).
- MI: secondary prevention. NICE clinical guideline 48 (2007).
- Atrial fibrillation. NICE clinical guideline 36 (2006).
- Dyspepsia. NICE clinical guideline 17 (2004).
- Clopidogrel in the treatment of non-ST-segment-elevation acute coronary syndrome. NICE technology appraisal guidance 80 (2004).
- Wireless capsule endoscopy for investigation of the small bowel. NICE interventional procedure guidance 101 (2004).

6 Updating the guideline

NICE clinical guidelines are updated so that recommendations take into account important new information. New evidence is checked 3 years after publication, and healthcare professionals and patients are asked for their views; we use this information to decide whether all or part of a guideline needs updating. If important new evidence is published at other times, we may decide to do a more rapid update of some recommendations. Please see our website for information about updating the guideline.

Appendix A: The Guideline Development Group, National Collaborating Centre and NICE project team

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Appendix B: The Guideline Review Panel

The Guideline Review Panel is an independent panel that oversees the development of the guideline and takes responsibility for monitoring adherence to NICE guideline development processes. In particular, the panel ensures that stakeholder comments have been adequately considered and responded to. The panel includes members from the following perspectives: primary care, secondary care, lay, public health and industry.

NICE to add

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