NICE National Institute for Health and Care Excellence

NICE guideline

Acute upper gastrointestinal bleeding in over 16s: management

Clinical guideline

Published: 13 June 2012
nice.org.uk/guidance/cg141

Contents

This guideline is the basis of QS38.

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 common 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 allows treatments to be delivered 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.

This guideline aims to identify which diagnostic and therapeutic steps are useful in managing acute upper gastrointestinal bleeding. This should enable hospitals to develop a structure in which clinical teams can deliver an optimum service for people who develop this condition.

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 and the code of practice that accompanies the Mental Capacity Act. In Wales, healthcare professionals should follow advice on consent from the Welsh Government. 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.

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.

Risk assessment

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

Timing of endoscopy

- Offer endoscopy to unstable patients with severe acute upper gastrointestinal bleeding immediately after resuscitation.
- Offer endoscopy within 24 hours of admission to all other patients with upper gastrointestinal bleeding.
- Units seeing more than 330 cases a year should offer daily endoscopy lists. Units seeing fewer than 330 cases a year should arrange their service according to local circumstances.

Management of non-variceal bleeding

- Do not use adrenaline as monotherapy for the endoscopic treatment of non-variceal upper gastrointestinal bleeding.
- For the endoscopic treatment of non-variceal upper gastrointestinal bleeding, use one of the following:
    - a mechanical method (for example, clips) with or without adrenaline
    - thermal coagulation with adrenaline
    - fibrin or thrombin with adrenaline.
- Offer interventional radiology to unstable patients who re-bleed after endoscopic treatment. Refer urgently for surgery if interventional radiology is not promptly available.

Management of variceal bleeding

- Offer prophylactic antibiotic therapy at presentation to patients with suspected or confirmed variceal bleeding.
- Consider transjugular intrahepatic portosystemic shunts (TIPS) if bleeding from oesophageal varices is not controlled by band ligation.

Control of bleeding and prevention of re-bleeding in patients on NSAIDs, aspirin or clopidogrel

- 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 gives details of the methods and the evidence used to develop the guidance.

1.1 Risk assessment

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

- the Blatchford score at first assessment, **and**
- the full Rockall score after endoscopy.

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

1.2 Resuscitation and initial management

1.2.1 Transfuse patients with massive bleeding with blood, platelets and clotting factors in line with local protocols for managing massive bleeding.

1.2.2 Base decisions on blood transfusion on the full clinical picture, recognising that over-transfusion may be as damaging as under-transfusion.

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

1.2.4 Offer platelet transfusion to patients who are actively bleeding and have a platelet count of less than 50×10^9/litre.

1.2.5 Offer fresh frozen plasma to patients who are actively bleeding and have a prothrombin time (or international normalised ratio) or activated partial thromboplastin time greater than 1.5 times normal. If a patient's fibrinogen level remains less than 1.5 g/litre despite fresh frozen plasma use, offer cryoprecipitate as well.

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

1.2.7 Treat patients who are taking warfarin and whose upper gastrointestinal bleeding has stopped in line with local warfarin protocols.

1.2.8 Do not use recombinant factor VIIa except when all other methods have failed.

1.3 Timing of endoscopy

1.3.1 Offer endoscopy to unstable patients with severe acute upper gastrointestinal bleeding immediately after resuscitation.

1.3.2 Offer endoscopy within 24 hours of admission to all other patients with upper gastrointestinal bleeding.

1.3.3 Units seeing more than 330 cases a year should offer daily endoscopy lists. Units seeing fewer than 330 cases a year should arrange their service according to local circumstances.

1.4 Management of non-variceal bleeding

Endoscopic treatment

1.4.1 Do not use adrenaline as monotherapy for the endoscopic treatment of non-variceal upper gastrointestinal bleeding.

1.4.2 For the endoscopic treatment of non-variceal upper gastrointestinal bleeding, use one of the following:

- a mechanical method (for example, clips) with or without adrenaline
- thermal coagulation with adrenaline
- fibrin or thrombin with adrenaline.

Proton pump inhibitors

1.4.3 Do not offer acid-suppression drugs (proton pump inhibitors or H_2-receptor antagonists) before endoscopy to patients with suspected non-variceal upper gastrointestinal bleeding.

1.4.4 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

1.4.5 Consider a repeat endoscopy, with treatment as appropriate, for all patients at high risk of re-bleeding, particularly if there is doubt about adequate haemostasis at the first endoscopy.

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

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

1.5 Management of variceal bleeding

1.5.1 Offer terlipressin to patients with suspected variceal bleeding at presentation. Stop treatment after definitive haemostasis has been achieved, or after 5 days, unless there is another indication for its use[1].

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

Oesophageal varices

1.5.3 Use band ligation in patients with upper gastrointestinal bleeding from oesophageal varices.

1.5.4 Consider transjugular intrahepatic portosystemic shunts (TIPS) if bleeding from oesophageal varices is not controlled by band ligation.

Gastric varices

1.5.5 Offer endoscopic injection of *N*-butyl-2-cyanoacrylate to patients with upper gastrointestinal bleeding from gastric varices.

1.5.6 Offer TIPS if bleeding from gastric varices is not controlled by endoscopic injection of *N*-butyl-2-cyanoacrylate.

1.6 Control of bleeding and prevention of re-bleeding in patients on NSAIDs, aspirin or clopidogrel

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

1.6.2 Stop other non-steroidal anti-inflammatory drugs (including cyclooxygenase-2 [COX-2] inhibitors) during the acute phase in patients presenting with upper gastrointestinal bleeding.

1.6.3 Discuss the risks and benefits of continuing clopidogrel (or any other thienopyridine antiplatelet agents) in patients with upper gastrointestinal bleeding with the appropriate specialist (for example, a cardiologist or a stroke specialist) and with the patient.

1.7 Primary prophylaxis for acutely ill patients in critical care

1.7.1 Offer acid-suppression therapy (H_2-receptor antagonists or proton pump inhibitors) for primary prevention of upper gastrointestinal bleeding in acutely ill patients admitted to critical care. If possible, use the oral form of the drug.

1.7.2 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 critical care.

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 where appropriate
- ensuring patients and their families and carers receive consistent information.

[1] At the time of publication (June 2012), terlipressin was 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.

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 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 (critical care) who are 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 and resuscitation.
- 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 upper gastrointestinal 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.

There is more information about how NICE clinical guidelines are developed on the NICE website. A booklet, 'How NICE clinical guidelines are developed: an overview for stakeholders, the public and the NHS' is available.

3 Implementation

NICE has developed tools to help organisations implement this guidance.

4 Other versions of this guideline

4.1 Full guideline

The full guideline, Acute upper gastrointestinal bleeding: management contains details of the methods and evidence used to develop the guideline. It is published by the National Clinical Guideline Centre.

4.2 NICE pathway

The recommendations from this guideline have been incorporated into a NICE pathway.

4.3 Information for the public

NICE has produced information for the public explaining this guideline.

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

5 Related NICE guidance

- Stent insertion for bleeding oesophageal varices. NICE interventional procedure guidance 392 (2011).
- Alcohol-use disorders. NICE clinical guideline 100 (2010).
- Unstable angina and NSTEMI. NICE clinical guideline 94 (2010).
- Prevention of cardiovascular disease at population level. NICE public health guidance 25 (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).
- 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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Changes after publication

April 2015: Recommendation 1.2.5 has been amended to add the use of cryoprecipitate as further treatment.

October 2012: Minor maintenance.

About this guideline

NICE clinical guidelines are recommendations about the treatment and care of people with specific diseases and conditions in the NHS in England and Wales.

The guideline was developed by the National Clinical Guideline Centre, which is based at the Royal College of Physicians. The Centre worked with a group of healthcare professionals (including consultants, GPs and nurses), patients and carers, and technical staff, who reviewed the evidence and drafted the recommendations. The recommendations were finalised after public consultation.

The methods and processes for developing NICE clinical guidelines are described in The guidelines manual.

The recommendations from this guideline have been incorporated into a NICE pathway. We have produced information for the public explaining this guideline. Tools to help you put the guideline into practice and information about the evidence it is based on are also available.

Your responsibility

This guidance represents the view of NICE, which was arrived at after careful consideration of the evidence available. Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. However, the guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer, and informed by the summary of product characteristics of any drugs they are considering.

Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this guidance should be interpreted in a way that would be inconsistent with compliance with those duties.

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