Acute upper gastrointestinal bleeding in over 16s; management (2012) NICE guideline CG141

Appendix A: Summary of new evidence from surveillance

Risk assessment

141 – 01 In patients with upper gastrointestinal bleeding (with or without co-morbidities) is there an accurate scoring system (Rockall, Blatchford) to identify which patients are high risk (of mortality, rebleeding, need for blood transfusion, surgical intervention) and require immediate intervention and those at low risk who can be safely discharged?

Recommendations derived from this question

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.

Surveillance decision

This review question should not be updated.

Risk scoring systems

2-year Evidence Update summary

A retrospective study[1] of 171 people presenting with upper gastrointestinal bleeding found the Blatchford score had significantly better overall prognostic ability than the pre-endoscopy Rockall score. The Blatchford score and the post-endoscopy Rockall score had similar prognostic ability. The Evidence Update concluded that the Blatchford and Rockall scores are insufficient when used alone. The results of this study support current recommendations to use both scores for risk assessment.

4-year surveillance summary

No relevant evidence was identified.

Topic expert feedback

One topic expert identified evidence for the performance of new thresholds of the Glasgow Blatchford score which found a modified threshold increased identification of people with upper gastrointestinal haemorrhage. However, this study was not included in the evidence summary as the abstract does not report the full definitions or statistical results of all diagnostic thresholds.

Impact statement

Evidence from the 2-year Evidence Update is consistent with current NICE guideline CG141 recommendations to use both the Blatchford score and post-endoscopy Rockall score for risk assessment.

New evidence is unlikely to change guideline recommendations.

Resuscitation and initial management

141 – 02 In patients with upper GI bleeding with low level of haemoglobin pre-endoscopy, what is the most clinical and cost effective threshold and target level at which red blood cell transfusions should be administered to improve outcome?

Recommendations derived from this question

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.

Surveillance decision

This review question should not be updated.

Restrictive or liberal blood transfusion strategies

2-year Evidence Update summary

A randomised controlled trial[2] compared liberal with restrictive blood transfusion strategies in 921 people with haematemesis or bloody nasogastric aspirate, or melaena. Mortality at 45 days was significantly lower in the restrictive group with a haemoglobin threshold of 7 g/dl compared with the liberal group with a haemoglobin threshold of 9 g/dl.

A UK-based study, TRIGGER[3] (Transfusion in Gastrointestinal Bleeding, n=936), found no significant differences in mortality, further bleeding or serious adverse events between a restrictive group with haemoglobin <8 g/dl and a liberal group with haemoglobin <10 g/dl.

The Evidence Update concluded that this evidence suggests a reduction of mortality and adverse events are associated with a lower threshold for blood transfusion. This evidence is consistent with the current recommendation.

4-year surveillance summary

No relevant evidence was identified.

Topic expert feedback

No topic expert feedback was relevant to this evidence.

Impact statement

Evidence from the 2-year Evidence Update is consistent with current NICE guideline CG141 recommendations to base decisions on blood transfusion on the full clinical picture, recognising that over-transfusion may be as damaging as under-transfusion.

New evidence is unlikely to change guideline recommendations.

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141 – 03 In patients with upper GI bleeding with low platelet count and / or abnormal coagulation factors pre-endoscopy, what is the most clinical and cost effective threshold and target level at which platelets and / or clotting factors should be administered to improve outcome?

Recommendations derived from this question

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 x 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 Vlla except when all other methods have failed.

Surveillance decision

No new information was identified at any surveillance review.

Timing of endoscopy

141 – 04 In patients with GI bleeding, does endoscopy carried out within 12 hrs of admission compared to 12-24 hours or longer improve outcome in respect of length of hospital stay, risk of re-bleeding or mortality?

Recommendations derived from this question

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.

Surveillance decision

No new information was identified at any surveillance review.

Management of non-variceal bleeding

141 – 05 In patients with non-variceal upper gastrointestinal bleeding are combinations of endoscopic treatments more clinically/cost effective than adrenaline injection alone?

Recommendations derived from this question

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.

Surveillance decision

This review question should not be updated.

Hemospray Application

Hemospray is a non-thermal device used as an endoscopic treatment for the management of non-variceal upper gastrointestinal bleeding through the application of a powder towards the source of bleeding.

2-year Evidence Update summary
No relevant evidence was identified

4-year surveillance summary
No relevant evidence was identified

Topic expert feedback
One topic expert suggested consideration of Hemospray Application as a new intervention for non-variceal upper gastrointestinal bleeding and provided evidence to support this view. However, this study was not included in the evidence summary as it does not meet the criteria of an RCT as required by the guideline protocol.

Two topic experts confirmed the availability of Hemospray in the UK and specified its use when other standard endoscopic treatments fail.

Impact statement
Evidence from topic experts identified Hemospray Application as a potential new intervention for non-variceal upper gastrointestinal bleeding and confirmed its availability in the UK. However, due to a current lack of clinical trials in this area it would seem premature to consider including in the guideline at this time.

New evidence is unlikely to change guideline recommendations.

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141 – 06 Are Proton Pump Inhibitors (PPIs) the most clinical / cost effective pharmaceutical treatment, compared to H_2-receptor antagonists (H_2-RAs) or placebo, to improve outcome in patients presenting with likely non-variceal Upper Gastrointestinal Bleeding (UGIB) prior and after endoscopic investigation?

Recommendations derived from this question

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

Surveillance decision

No new information was identified at any surveillance review.

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141 – 07 Are proton pump inhibitors administered intravenously more clinical / cost effective than the same agents administered in tablet form for patients with likely non-variceal upper gastrointestinal bleeding?

Recommendations derived from this question

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

Surveillance decision

This review question should not be updated.

PPIs and H2-receptor antagonists

2-year Evidence Update summary
No relevant evidence was identified

4-year surveillance summary
No relevant evidence was identified

Topic expert feedback
Intelligence identified MHRA drug safety warnings on proton pump inhibitors (April 2010, April 2012, April 2012 and September 2015).

Impact statement
The MHRA drug safety warnings (April 2010, April 2012, April 2012 and September 2015) are not thought to impact on recommendations and do not require footnotes in the guideline.

New evidence is unlikely to change guideline recommendations.

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141 – 08 In patients with non-variceal upper gastrointestinal bleeding after first endoscopic treatment, is a routine second-look endoscopy more clinically / cost effective than routine clinical follow-up?

Recommendations derived from this question

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.

Surveillance decision

No new information was identified at any surveillance review.

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141 – 09 In patients with non-variceal upper gastrointestinal bleeding who re-bleed after the first endoscopic therapy is repeat endoscopy more clinical / cost effective compared to surgery or embolization / angiography to stop bleeding?

Recommendations derived from this question

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

Surveillance decision

This review question should not be updated.

Emergency surgery and embolisation

2-year Evidence Update summary
No relevant evidence was identified

4-year surveillance summary
A systematic review and meta-analysis[6] combined 9 studies comparing emergency surgery with transarterial embolisation in 711 people with non-variceal upper gastrointestinal bleeding. Risk of re-bleeding was significantly lower for surgery compared with embolisation. Mortality rates did not differ between the interventions. However, the systematic review concluded that the inclusion of poor quality studies introduced multiple sources of bias into the findings.

A meta-analysis[7] of 6 studies combined 423 people with recurrent non-variceal upper gastrointestinal bleeding following a failed endoscopic haemostasis. Significantly higher risk of re-bleeding was found for transcatheter arterial embolisation compared with surgery. Mortality rates or requirement for additional interventions did not differ between the groups. However, the meta-analysis concluded that the comparison groups were different at baseline with an older and poorer health population in the transcatheter arterial embolisation group.

Topic expert feedback
No topic expert feedback was relevant to this evidence.

Impact statement
Evidence from the 4-year surveillance review suggests surgery is more effective than embolisation to reduce risk of re-bleeding. However, the evidence from the meta-analyses is limited and further evidence to assess the effect on the guideline recommendations is needed.

New evidence is unlikely to change guideline recommendations.

141 – 10 In patients with non-variceal upper gastrointestinal bleeding where endoscopic therapy fails, is angiography / embolization more clinical / cost effective than surgery to stop bleeding?

Recommendations derived from this question

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.

Surveillance decision

No new information was identified at any surveillance review.

Management of variceal bleeding

141 – 11 In patients presenting with likely variceal UGIB at initial management, is terlipressin compared to octreotide, somatostatin or placebo the most clinical / cost effective pharmaceutical strategy?

Recommendations derived from this question

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*.

* 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.

Surveillance decision

This review question should not be updated.

Pharmaceutical strategies

2-year Evidence Update summary
No relevant evidence was identified

4-year surveillance summary
An RCT[8] (n=780) found no significant differences in rates of treatment success, control of bleeding, re-bleeding, or mortality between terlipressin, somatostatin, and octreotide when given before endoscopic treatment in people with acute variceal bleeding.

A systematic review and meta-analysis[9] found no significant differences in rates of re-bleeding between vasopressin/terlipressin and somatostatin/octreotide in people with oesophageal varices.

Topic expert feedback
One topic expert also identified evidence[8] that found no difference among terlipressin, somatostatin and octreotide in the control of acute gastroesophageal variceal haemorrhage. This study was identified through the

surveillance and included in the 4-year surveillance summary.

Intelligence suggests that terlipressin is only licensed for the treatment of bleeding oesophageal varices and the maximum duration of treatment varies between 48 to 72 hours for the different preparations.

It was also found that some preparations of octreotide are licensed for variceal upper gastrointestinal bleeding but only in people with cirrhosis.

Further intelligence suggests that somatostatin may not be available in the UK as it is not listed in the BNF or electronic medicines compendium as licensed for treatment of bleeding oesophageal varices.

Impact statement
Evidence from the 4-year surveillance review and topic experts suggests there is no clinical difference between pharmaceutical strategies for the management of variceal bleeding. However, further intelligence found limited licenses of somatostatin and octreotide for this indication. Also, during guideline development, a cost-effectiveness benefit was found for terlipressin. This evidence appears in line with that found at the time of the guideline development and is unlikely to change the recommendation.

New evidence is unlikely to change guideline recommendations.

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141 – 12 In patients with confirmed variceal UGIB after endoscopic treatment, how long should pharmacological therapy (terlipressin or octreotide) be administered to improve outcome in terms of clinical and cost effectiveness?

Recommendations derived from this question

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*.

* 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.

Surveillance decision

No new information was identified at any surveillance review.

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141 – 13 In patients with likely variceal bleeding at initial management are antibiotics better than placebo to improve outcome (mortality, re-bleeding, length of hospital stay, rates of infection)?

Recommendations derived from this question

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

Surveillance decision

No new information was identified at any surveillance review.

141 – 14 In patients with confirmed oesophageal varices is band ligation superior to injection sclerotherapy in terms of re-bleeding and death?

Recommendations derived from this question

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

Surveillance decision

This review question should not be updated.

Endoscopic ligation and sclerotherapy

2-year Evidence Update summary
No relevant evidence was identified

4-year surveillance summary
An RCT[10] (n=96) found significantly higher rates of bleeding for endoscopic ligation combined with sclerotherapy compared with endoscopic ligation alone in people with both oesophageal and gastric varices. Rates of mortality or adverse events did not differ between the groups.

Topic expert feedback
No topic expert feedback was relevant to this evidence.

Impact statement
Evidence from the 4-year surveillance suggests ligation has lower risks of bleeding than sclerotherapy. However, this trial does not provide separate data for oesophageal varices in the abstract and does not compare ligation with sclerotherapy alone. This evidence is unlikely to impact current recommendations to use band ligation in patients with oesophageal varices.

New evidence is unlikely to change guideline recommendations.

141 – 15 What is the evidence that TIPS is better than repeat endoscopic therapy or balloon tamponade in patients where the variceal bleed remains uncontrolled?

Recommendations derived from this question

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

Surveillance decision

No new information was identified at any surveillance review.

141 – 16 In patients with confirmed gastric variceal bleeding which initial treatment (endoscopic injection of glue or thrombin and/or transjugular

intrahepatic portosystemic shunts [TIPS]) is the most clinical and cost effective to improve outcome?

Recommendations derived from this question

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.

Surveillance decision

This review question should not be updated.

Transjugular intrahepatic portosystemic shunts [TIPS]

2-year Evidence Update summary
No relevant evidence was identified

4-year surveillance summary
A meta-analysis[11] combining 3 studies with 220 people with gastric variceal bleeding compared TIPS with endoscopic variceal sclerotherapy (EVS). Management with TIPS significantly reduced variceal re-bleeding and significantly increased hepatic encephalopathy compared with EVS. No difference in survival rates between the groups was found.

An RCT[12] (n=72) found TIPS with covered stents significantly reduced re-bleeding compared with endoscopic variceal ligation or glue injection combined with beta-blocker in people with gastric and/or oesophageal variceal bleeding. No difference in mortality or treatment failure rates between groups was found.

A meta-analysis[13] combining 6 studies found rates of treatment failure, overall survival, and bleeding-related death significantly improved with TIPS compared to medical or endoscopic therapy for people with acute variceal bleeding. However, rates of re-bleeding or hepatic encephalopathy did not differ between the groups.

Topic expert feedback
No topic expert feedback was relevant to this evidence.

Impact statement
Evidence from the 4-year surveillance review suggests effectiveness of TIPS compared with endoscopic therapy. However, the results are mixed with regards to the key outcomes of mortality and re-bleeding rates. There is a lack of consistent evidence to impact current recommendations to offer TIPS when initial treatment with endoscopic injection of N-butyl-2-cyanoacrylate does not control bleeding.

New evidence is unlikely to change guideline recommendation

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

141 – 17 In patients presenting with upper gastrointestinal bleeding who are already on NSAIDs, Clopidogrel, Aspirin or dipyridamol (single or combination) what is the evidence that discontinuation compared to continuation of the medication leads to better outcome?

Recommendations derived from this question

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.

Surveillance decision

No new information was identified at any surveillance review.

Primary prophylaxis for acutely ill patients in critical care

141 – 18 For acutely ill patients in high dependency and intensive care units are Proton Pump Inhibitors (PPI) or H2-receptor antagonists (H2-RA) more clinically effective compared to placebo (or each other) in the primary prophylaxis of Upper Gastrointestinal Bleeding?

Recommendations derived from this question

1.7.1 Offer acid-suppression therapy (H2-receptor antagonists or proton pump inhibitors) for primary prevention of upper gastrointestinal bleeding in acutely ill patients admitted to 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.

Surveillance decision

This review question should not be updated.

Acid-suppression therapy

2-year Evidence Update summary

A systematic review and meta-analysis[14] combining 20 RCTs with 1971 people compared stress-ulcer prophylaxis with PPIs or H2-receptor antagonists with a placebo or no prophylaxis. Rates of mortality or pneumonia did not differ significantly between groups. Gastrointestinal bleeding was significantly

lower with stress-ulcer prophylaxis than with placebo or no prophylaxis.

Two systematic reviews and meta-analyses[15,16] compared PPIs with H2-receptor antagonists for stress-ulcer prophylaxis. Gastrointestinal bleeding was significantly lower with PPIs compared with H2-receptor antagonists. Rates of pneumonia, all-cause mortality or days in the critical care unit did not differ significantly between groups.

A US-based cost-effectiveness analysis[17] estimated hospital costs and length of hospital stay for PPIs and H2-receptor antagonists in people at high risk of developing stress-ulcer-related bleeding. The base-case analysis for cost of treating a patient with no complications found PPIs were more cost-effective than H2-receptor antagonists. The incremental cost effectiveness ratio indicated that although PPIs became more expensive their greater effect on bleeding meant that they remained more effective than H2-receptor antagonists.

The Evidence Update concluded that no impact on current recommendations expected as there was a need for trials comparing PPIs with placebo.

4-year surveillance summary
No relevant evidence was identified

Topic expert feedback
One topic expert highlighted a study suggesting increased risks associated with proton pump inhibitors compared with histamine-2 receptor antagonists that is contrary to the current recommendation 1.7.1 which suggests the use of either drug. However, this study was not included in the evidence summary as it does not meet the criteria of an RCT as required by the guideline protocol.

Intelligence has identified an ongoing study (SUP-ICU trial) comparing PPI with placebo which will be monitored for completion at the next surveillance review.

Intelligence also identified limited licensing for acid-suppression therapy in seriously ill patients. It was found that only the H2-receptor antagonist ranitidine is licensed for this indication and that use of proton pump inhibitors would be off-label.

Impact statement
The evidence from the 2-year Evidence Update suggests that stress-ulcer prophylaxis for patients in critical care units may reduce gastrointestinal bleeding but may have no effects on all-cause mortality, pneumonia, or time spent in critical care. PPIs may be more clinically effective and more cost effective than H2-receptor antagonists and H2-receptor antagonists may be more clinically effective than placebo. The Evidence Update concluded that trials of PPIs compared with placebo are needed and that the current evidence is unlikely to impact NICE guideline CG141.

No new evidence was identified through the 4-year surveillance to change this conclusion.

Evidence from topic experts suggests PPIs are associated with increased risks however there is a need for clinical trials to support this finding and at this time the evidence is unlikely to change recommendations. Although, an ongoing study (SUP-ICU trial) comparing PPIs with placebo may provide further evidence.

The guideline will be amended to include a footnote to the recommendation (1.7.1) for acid-suppression therapy for primary prevention of upper gastrointestinal bleeding in acutely ill patients. This footnote is to make reference to the licensing limitations of H2-receptor antagonists and proton pump inhibitors for this indication.

New evidence is unlikely to impact on the guideline.

Information and support for patients and carers

141 – 19 What information is needed for patients with acute upper gastrointestinal bleeding and their carers (including information at presentation, prophylaxis and information for carers)?

Recommendations derived from this question

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.

Surveillance decision

No new information was identified at any surveillance review.

New Questions

NQ – 01 Erythromycin for improved endoscopic imaging

NICE guideline CG141 does not include recommendations on use of erythromycin as a prokinetic agent to improve endoscopy results.

New evidence has subsequently been identified and considered for possible addition to the guideline as a new question.

Surveillance decision

This question should not be added.

Erythromycin as a prokinetic agent

2-year Evidence Update summary

A systematic review[18] of 7 RCTs combining 558 people with upper gastrointestinal bleeding assessed the effect of an infusion of erythromycin before endoscopy in adults with upper gastrointestinal bleeding. The results suggested that erythromycin was associated with increased visibility of the gastric mucosa and reduced second endoscopies, blood transfusions, and length of hospital stay.

The Evidence Update concluded that no impact on CG141 was expected as this study has limitations and that the findings should be confirmed in a large RCT.

At the time of publication of the 2-year Evidence Update, erythromycin did not have UK marketing authorisation for this indication.

4-year surveillance summary

No relevant evidence was identified.

Topic expert feedback

One topic expert suggested inclusion of a recommendation regarding the use of prokinetic agents at pre-endoscopy to improve the endoscopic view and reduce the need for repeat endoscopy. A study identified on this topic was not included in the evidence summary as it was published prior to the guideline.

Intelligence suggests that erythromycin is not licensed for this indication.

Impact statement
Evidence from the 2-year Evidence Update suggests benefits of an infusion of erythromycin before endoscopy. The Evidence Update concluded that the current evidence was unlikely to impact on NICE guideline CG141. Due to variations in assessment, definitions and doses within the included studies, confirmation of the results in a large RCT are required before considering any impact on the guideline.

Intelligence indicates that erythromycin is not licensed and is unlikely to change the recommendations.

New evidence is unlikely to impact on the guideline.

NQ – 02 Tranexamic acid

NICE guideline CG141 does not include recommendations on use of tranexamic acid for upper gastrointestinal bleeding.

New evidence has subsequently been identified and considered for possible addition to the guideline as a new question.

Surveillance decision

This question should not be added.

Tranexamic acid

2-year Evidence Update summary
A Cochrane review[4] of 7 RCTs (n=1654) compared tranexamic acid with placebo for the treatment of upper gastrointestinal bleeding. Mortality was significantly lower in the tranexamic acid group compared with placebo. Bleeding and need for transfusion did not differ significantly between groups.

The Evidence Update concluded that no impact on CG141 was likely considering the limitations with this study and the lack of further evidence. Additional trials were suggested to determine the effect of tranexamic acid and the HALT-IT trial was identified as ongoing.

At the time of publication of the 2-year Evidence Update, tranexamic acid did not have UK marketing authorisation for this indication.

4-year surveillance summary

An update of the above Cochrane review[5] identified 8 RCTs and found no difference to their previous conclusions.

Topic expert feedback
Three topic experts identified the HALT-IT trial as a study of tranexamic acid for gastrointestinal bleeding. However, this trial is currently ongoing and due to complete recruitment in 2017.

Intelligence identified a variety of tranexamic acid preparations with a couple of the injectable preparations licensed for gastrointestinal bleeding.

Further intelligence suggests that the HALT-IT trial may have used a dose and regimen that would be considered off-label and would need to be checked when published.

Impact statement
NICE guideline CG141 does not include recommendations on use of tranexamic acid for upper gastrointestinal bleeding.

Evidence from the 2-year Evidence Update and 4-year surveillance is limited with the inclusion of old trials and lack of adherence to current clinical practice as concluded in the Evidence Update. The Evidence Update also concluded that this evidence is unlikely to impact NICE guideline CG141 and further randomised controlled trials are needed. The evidence identified through the 4-year surveillance is unlikely to change this conclusion.

The HALT-IT trial may provide further evidence on use of tranexamic acid for upper gastrointestinal bleeding. However, intelligence suggests the HALT-IT trial may have used a dose and regimen that would be considered off-label and would need to be checked when published.

New evidence is unlikely to change guideline recommendations.

Research recommendations

No research recommendations were made for NICE guideline CG141.

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