

Bleeding

Clinical decision and action checklist

- 1 Is there a risk of bleeding?
- 2 Is the patient hypotensive?
- 3 Is a coagulation disorder present?
- 4 Is the bleeding site visible?
- 5 Is the source of bleeding internal?

Key points

- Catastrophic, external bleeding is rare.¹
- Control of external bleeding is usually possible.
- Exclude coagulation disorders.

Severe haemorrhage

Since small, repeated bleeds can herald a major bleed, haemorrhage is a common fear, but in reality it is an uncommon problem.¹ Admission may be needed for minor bleeds if the patient and family find these frightening and if they wish treatment. Successful treatment of a major haemorrhage is usually only possible in acute hospital settings in non-malignant conditions.²

In any setting, dark green or blue towels soaked up the blood loss without appearing red. Perineal pads will help with the management of low gastrointestinal bleeding. The patient will feel cold because of the hypotension, and will need warm blankets. Such an event is frightening for the patient, who may need rapid sedation intravenously. The touch and closeness of another person is essential. Partner, family and staff will need support after such an experience.

Radiotherapy

This is helpful in many patients with haemoptysis³ and haematuria.⁴ Single treatments are possible in frail patients, and internal radioactive sources (brachytherapy) are being used for oesophageal and bronchial bleeding. Intravaginal and intrauterine sources can also be used to control bleeding from advanced gynaecological tumours.⁵

Pharmacological agents

Topical/locally acting drugs

Sucralfate is useful in controlling the bleeding from a gastric carcinoma,⁶ or it can be applied topically, directly to the bleeding point if this is visible. A 1% alum solution can reduce bladder haemorrhage (*see* cd-2 in Urinary and sexual problems (p. 153)).⁷ Topical tranexamic acid reduces bleeding from a rectal carcinoma and other sites.⁸ Vasoconstrictors such as adrenaline work for 10–15 minutes but re-bleeding is common as the adrenaline is absorbed.

Systemic drugs

Tranexamic acid inhibits the breakdown of fibrin clots and is well absorbed orally,⁹ but in haema-

turia it can produce hard clots that are difficult to remove and can cause obstruction.¹⁰

Dressing

Some dressings such as calcium alginate are haemostatic. Dressings with very low adherence (e.g. Mepitel) are useful as a base for applying sucralfate. These and moist environment dressings (alginate, hydrogels) can be left in place for up to 7 days, avoiding any disturbance to the fragile bleeding surface.

Heat and cold

Lasers can palliate bleeding from tumours accessible externally or through an endoscope.¹¹ Diathermy can be helpful, but can make bladder bleeding worse.⁷ The effects of cryotherapy are usually brief.

Embolisation

This can be useful in controlling bleeding,^{12,13} and it has been used in haemoptyses,¹³ bleeding from the bladder,¹⁴ prostate,¹⁵ stomach¹⁶ and malignant ulcers.¹⁷ Pain and pyrexia may occur for a few days after embolisation. There are risks, especially in the presence of abnormal anatomy,¹⁸ and it needs a radiologist and clinician experienced in the procedure.

Coagulation disorders

These can be caused by platelet deficiency or malfunction, by excessive clotting (e.g. with pancreatic carcinoma), or may be due to widespread microvascular clotting which uses up clotting factors, resulting in a coexistent tendency to bleed (disseminated intravascular coagulation – DIC). If treatment is appropriate, coagulation disorders invariably require admission to hospital under the care of a haematology team. In very advanced disease such treatment is not usually appropriate, but some cases of DIC respond to a simpler regimen of an antifibrinolytic such as tranexamic acid and low dose heparin.¹⁹ The advice of a haematologist remains essential. Fortunately such events are uncommon, and usually occur in the last hours or days of life when distressing bleeding can be managed as described above.

Clinical decision	If YES ⇒ Action
1 Is there a risk of bleeding?	<ul style="list-style-type: none"> • <i>If on warfarin:</i> keep INR to between 1.5 and 3. • <i>If coagulation disorder (e.g. low platelets):</i> consider treatment under the advice of a haematologist. • <i>If rapidly growing and erosive tumour:</i> keep dark green or blue towel and sedation to hand. Consider referral for radiotherapy or embolisation.
2 Is the patient hypotensive?	<ul style="list-style-type: none"> • <i>If treatment is appropriate:</i> see cd-2 in Emergencies: sudden collapse (see p. 205). • <i>If treatment is not appropriate:</i> If the patient is distressed: give diazepam 5–30 mg titrated IV (if IV access not possible, give midazolam 5–15 mg buccally or into the deltoid muscle). If haemorrhage is visible (ulcer, haemoptysis, haematemesis) – use dark green or blue towels to make the appearance of blood less frightening to patient, partner or family. Place warm blankets over the patient and do not leave them unattended.
3 Is a coagulation disorder present?	<ul style="list-style-type: none"> • Consider: low or abnormal platelets, increased warfarin levels (due to reduced warfarin metabolism or displacement by another drug), disseminated intravascular coagulation, or severe hepatic impairment. • Treatment can be difficult – the advice of a haematologist is essential.
4 Is the bleeding site visible?	<ul style="list-style-type: none"> • Apply pressure to stop flow. • <i>Promote clotting:</i> apply sucralfate suspension or a calcium alginate dressing. • <i>Prevent rebleeding:</i> Topical: apply sucralfate under non-adherent dressing (e.g. Mepitel). Dressing can be left in place for several days, although re-bleeding may need a daily application of sucralfate. Systemic: tranexamic acid PO 1 g 8-hourly. • Consider: radiotherapy, diathermy or embolisation.
5 Is the source of bleeding internal?	<ul style="list-style-type: none"> • <i>Haemoptysis:</i> If minor (streaked sputum) – tranexamic acid PO 1 g 8-hourly. If troublesome (clots, anaemia or frequent bleeds): radiotherapy, laser, or embolisation. • <i>Haematemesis:</i> Stop gastric irritants, e.g. nonsteroidal anti-inflammatory drugs. If minor (altered blood or positive faecal occult blood): 2 g sucralfate on waking and night. If troublesome (fresh blood, melaena or anaemia) – 2 g sucralfate 4-hourly + ranitidine 300 mg 12-hourly (or lansoprazole 30 mg PO daily). NB: If source is non-malignant – refer urgently for endoscopy and surgical opinion. • <i>Mouth or nasopharynx:</i> If anterior nose: pack with gauze soaked in 1% alum solution or sucralfate suspension. Refer to Ear, Nose and Throat surgeons if re-bleeding occurs. If posterior nose: refer to Ear, Nose and Throat surgeons for packing under observation + diathermy. If oral: use sucralfate suspension (diluted 1:1 with water) as a mouthwash. • <i>Rectum or vagina:</i> If minor (streaking only): observe and consider pads. If troublesome (clots, frequent bleeds or anaemia) – tranexamic acid PO 1 g 8-hourly. Consider radiotherapy, topical sucralfate suspension or topical tranexamic acid. • <i>Other sources:</i> Haematuria: see cd-2 in <i>Urinary and sexual problems</i> (p. 153). Intrapleural or intra-abdominal: exclude coagulation disorder or trauma. Start tranexamic acid PO 1 g 8-hourly.

Adapted from Makin and Regnard²⁰

cd = clinical decision

References

B = book; C = comment; Ch = chapter; CS-n = case study-number of cases; CT-n = controlled trial-number of cases; E = editorial; GC = group consensus; I = interviews; Let = letter; LS = laboratory study; MC = multi-centre; OS-n = open study-number of cases; R = review; RCT-n = randomised controlled trial-number of cases; RS-n = retrospective survey-number of cases; SA = systematic or meta analysis.

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