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# Rectal Bleeding in Adults

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The passage of blood per rectum is a very common symptom. It is often attributed by patients to haemorrhoids and they are a common cause of this symptom. However, there are other causes and it is important to know what the possible causes are and when and how to investigate this symptom further.

The type and amount of the bleeding as well as the age of the patient are important in initial assessment of the bleeding. There are many causes of rectal bleeding and the likely aetiology depends on the age of the patient and the frequency of the underlying diseases in a given population. Rectal bleeding always warrants further assessment and medical advice. It is essential to make appropriate referrals, ie to the right specialist team and with the correct degree of urgency.

For details on rectal bleeding in children see separate article [Rectal Bleeding in Children](#).

## Epidemiology<sup>[1]</sup>

- Rectal bleeding is a very common symptom. It occurs in adults of all ages.
- The incidence of rectal bleeding is essentially unknown as it is not well studied and much of it goes unreported.
- Prevalence has been estimated as high as 10% of adults annually in the UK. Most of this will not be reported.
- The majority of cases of rectal bleeding are due to benign causes, particularly haemorrhoids and anal fissures. However, there are many other possible causes, some of which are sinister. In particular the cause to be excluded is colorectal cancer.

## Aetiology<sup>[1]</sup>

It is difficult to obtain accurate figures for the relative frequency of the different causes of rectal bleeding. Studies have differing results according to population demographics, patient selection, size of study and other confounding factors. However, it is essential to understand the aetiology, as this shapes the investigations, management and ultimately the likely outcome.

The age of the patient gives a clue to aetiology and as a result forms a part of referral guidelines (see below). Those under the age of 30 presenting with rectal bleeding are more likely to have haemorrhoids, an anal fissure or inflammatory bowel disease. For those over the age of 50, there should be a higher suspicion of colorectal cancer.

### Common causes of rectal bleeding

- Benign anorectal disease:
  - [Haemorrhoids](#).
  - Anal fissure.
  - Fistula-in-ano.
- [Diverticular disease](#).
- Inflammatory bowel disease:
  - [Crohn's disease](#).
  - [Ulcerative colitis](#).
- [Colonic polyps](#).
- [Colorectal or anal cancer](#).

## Less common causes of rectal bleeding

- Infectious gastroenteritis.
- Coagulopathies.
- Arteriovenous malformation (angiodysplasia).
- Massive upper gastrointestinal (GI) bleeding.
- Radiation proctitis.
- Ischaemic colitis (mesenteric vascular insufficiency).
- Solitary rectal ulcer.
- Dieulafoy's lesion of small or large bowel.
- Endometriosis.
- Meckel's diverticulum (in adults less often than children).
- Rectal varices.
- GI tract invasion of non-GI tract malignancy.
- Trauma (possible sexual abuse).
- Sexually transmitted infections.

## Presentation

In assessing rectal bleeding it is important to identify important presenting features as these can give clues to the likely aetiology and severity of bleeding. It is, for example, important to assess the amount of bleeding. There are three classifications according to the amount of bleeding:

- Occult bleeding - presenting with anaemia.
- Moderate bleeding - presenting with rectal bleeding (fresh or dark), or melaena in a patient who is haemodynamically stable.
- Massive bleeding - presenting with large amounts of blood passed rectally (may be dark but often fresh).

There may be:

- Shock with systolic blood pressure below systolic 90 mm Hg.
- Initial drop in haematocrit and haemoglobin less than 6 g/dL.
- Requirement for transfusion of two units of blood or more.
- Persistence of bleeding for more than three days.
- Significant re-bleeding within a week.

Massive lower GI bleeding requires urgent admission.

## Symptoms

Important details to elicit include:

- The quantity and nature of bleeding:
  - Fresh bright red blood usually comes from low down in the GI tract. Examples include fissures and haemorrhoids.
  - Bright red blood, however, can also occur with pathology higher in the GI tract.
  - Blood mixed in with the stool has usually originated higher in the GI tract.
  - The quantity of blood is very difficult to assess from the history but it is important to obtain a description from the patient. Indirect measures of the severity of bleeding are helpful.
- Unexplained weight loss.
- Change in bowel habit (both frequency of defecation and consistency of stool) must be recognised.
- Tenesmus. May be a feature (for example, with fissures).
- Anal symptoms - eg, soreness or pain may occur with fissures, itching with piles.
- Family history of bowel cancer or polyposis.
- Past medical history. Careful documentation with particular reference to causes of bleeding and GI tract pathology. Any history of trauma should not be overlooked.
- Medication history. This may identify causes of bleeding (for example, warfarin and aspirin).

## Examination

- General features. Look for:
  - Pallor or anaemia.
  - Cardiovascular signs of shock, including tachycardia and hypotension (including orthostatic hypotension).
  - Cachexia or obvious weight loss.
- Abdominal examination. Look for:
  - Masses.
  - Hepatomegaly.
- Stool examination or description:
  - Examination of stool may be possible, particularly on a home visit if the motion is still available to be seen.
  - Blood mixed with stool: the blood is darker and this usually indicates a lesion on the left side of the colon or even transverse colon (often carcinoma or inflammatory bowel disease).
  - Shiny black- or plum-coloured stool is often not recognised by the patient as blood (melaena). This indicates bleeding from higher up the GI tract - these patients need admission for investigation (usually upper GI tract endoscopy), either immediately or through an upper GI tract bleeding fast-track service (see separate [Upper Gastrointestinal Bleeding \(includes Rockall Score\)](#) article).
  - Bright red blood suggests a lesion in the rectum or anus. If blood is clearly separate from a stool, it indicates an anal lesion, usually haemorrhoids or a fissure - particularly if there are associated anal symptoms (for example, anal pain or pruritus ani) but, occasionally, other pathology (for example, proctitis or anal carcinoma). This emphasises the need for rectal examination.
  - With blood on the surface of the stool the lesion can be anal, but may be a more proximal lesion (for example, polyp or carcinoma in the rectum or descending colon).
- Rectal examination:
  - A digital rectal examination is usually appropriate, both to confirm blood in the rectum and to exclude any rectal or pelvic masses.
  - If the patient is not to be referred to secondary care for investigation, a digital rectal examination is essential.
  - Remember the finding of haemorrhoids or fissures does not necessarily exclude more proximal causes of bleeding.
  - Proctoscopy should help identify anorectal sources of bleeding. It cannot be used as a substitute for sigmoidoscopy, however, in ruling out serious pathology.<sup>[1]</sup>

## Investigations

The investigations chosen will depend on the particular mode of presentation and likely diagnosis. Unnecessary investigation should not delay referral where there is a high suspicion of malignancy. Rectal examination and FBC are worth performing on most patients prior to referral. Further blood tests will be guided by the presentation.

### Blood tests

- FBC (and group and save if bleeding is profound or anaemia suspected).
- Ferritin and iron studies if iron-deficiency anaemia is suspected.
- Clotting studies may be appropriate.
- LFTs may be indicated if liver disease is suspected.
- Faecal calprotectin is a useful screen in younger patients suspected of having inflammatory bowel disease, and has a high positive predictive value.<sup>[2, 3]</sup>

There is no evidence that tumour markers such as carcinoembryonic antigen (CEA) are useful as diagnostic tools in this situation.<sup>[1]</sup>

## Further investigation in secondary care<sup>[1, 4]</sup>

- **Flexible sigmoidoscopy.** This is the investigation of choice for younger patients where there is concern about pathology other than haemorrhoids, or those who have persistent bleeding following treatment for haemorrhoids.
- **Colonoscopy.** This is the definitive investigation where there is a high suspicion of malignancy, or a family history. It allows tissue biopsy and removal. However, it does not have a perfect pick-up rate and is an unpleasant test. Therefore, virtual colonoscopy has been approved as an effective alternative.<sup>[5]</sup>
- **Virtual colonoscopy (computed tomography (CT) colonography).** This method uses CT to examine the prepared, distended colon. Interpretation of the data combines two-dimensional methods with three-dimensional 'endoscopic fly-through' simulations - hence, 'virtual' colonoscopy. It is approved by National Institute for Health and Care Excellence (NICE) and Royal College of Radiologists (RCR) guidelines as a highly sensitive and well-tolerated tool in the diagnosis of colorectal cancer.<sup>[6, 7]</sup>

Barium enema is no longer considered to have a role in the investigation of rectal bleeding, due to its poor sensitivity and tolerability.

Guidance on urgency of referral for one of these investigations is given below.

## Management

This will be determined by the eventual diagnosis and the severity of bleeding. It is important to know when to refer.

### When to refer

Referral may be:

- Routine - may be appropriate for low-risk and benign conditions.
- Urgent (within two weeks).
- Emergency (immediate) when there is massive bleeding.

### Referral of suspected cancer<sup>[8]</sup>

**Refer** the following people under a two week wait suspected cancer pathway for colorectal cancer:

- Those aged  $\geq 40$  with unexplained weight loss and abdominal pain.
- Those aged  $\geq 50$  with unexplained rectal bleeding.
- Those aged  $\geq 60$  with:
  - Iron-deficiency anaemia.
  - Or, change in bowel habit.
- Those whose tests have been positive for occult blood in their faeces - NICE guidelines advise occult blood is tested for in:
  - Those aged  $\geq 50$  with unexplained abdominal pain or weight loss.
  - Those aged  $< 60$  with change in bowel habit or iron-deficiency anaemia.
  - Those aged  $\geq 60$  with anaemia, whether iron-deficient picture or not.

**Consider referring** the following people under a two week wait suspected cancer pathway for colorectal cancer:

- All those with a rectal or abdominal mass.
- Those aged  $< 50$  with rectal bleeding along with any of the following:
  - Unexplained abdominal pain.
  - Unexplained change in bowel habit.
  - Unexplained weight loss.
  - Unexplained iron-deficiency anaemia.

**Consider referring** any person with an unexplained anal mass or unexplained anal ulceration under a two week wait suspected cancer pathway for anal cancer.

## Assessing acute bleeding<sup>[9]</sup>

The Scottish Intercollegiate Guidelines Network (SIGN) has produced guidance for those assessing cases of rectal bleeding in hospital. This may also be useful for those considering referral.

- Follow-up in outpatients is suggested to be appropriate when:
  - The patient is less than age 60.
  - There is no haemodynamic disturbance.
  - There is no other evidence of massive rectal bleeding.
  - An obvious source of bleeding has been identified by rectal examination and/or sigmoidoscopy.
- Immediate admission is considered appropriate when:
  - The patient is over the age of 60.
  - There is haemodynamic disturbance.
  - There is evidence of massive bleeding.
  - Aspirin, non-steroidal anti-inflammatory drugs (NSAIDs) or other drugs likely to exacerbate bleeding are being taken.
  - There is significant comorbidity.

## Prognosis<sup>[10, 11]</sup>

This naturally depends on the cause, as well as other factors such as age and comorbidity.

No individual feature or symptom associated with rectal bleeding is strongly predictive of the eventual cause being diagnosed as colorectal cancer. However, certain associated features do make this cause more likely. These include:

- Weight loss.
- Age over 50.
- Change in bowel habit.
- Iron-deficiency anaemia.
- Blood mixed with stool.
- A strong family history of colorectal cancer.<sup>[1]</sup>

## Further reading & references

- [Diagnosis and management of colorectal cancer](#); Scottish Intercollegiate Guidelines Network - SIGN (December 2011)
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