Assessing rectal bleeding: A common symptom of haemorrhoids

Rectal bleeding is a ‘red flag’ sign and one of the referral criteria for a 2-week wait to see a specialist. However, in most cases, it is commonly associated with benign anorectal conditions such as haemorrhoids and fissures. Patients presenting with rectal bleeding need be examined, and may require further investigation and treatment. Fiona Hibberts outlines the process of diagnosis and the available conservative, invasive or surgical options in managing this common condition.

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Rectal bleeding is the most common symptom of referral to colorectal clinics (Lamah et al, 2000). In all cases, it requires examination, investigation and treatment, but it is most commonly associated with benign anorectal conditions, for example haemorrhoids and fissures. However, it can be a symptom of colorectal cancer and the presence of polyps, and therefore should not be ignored. With careful history taking and clinical examination, diagnosis, investigation and referral can be swift and appropriate, ensuring that the patient can then receive treatment and relief of this embarrassing and troublesome symptom.

Clinical history

It is important to first establish whether the bleeding is altered or outlet, as this will have implications for what further investigations are required. Altered blood is dark red, almost black, mixed with the stool, whereas outlet blood is fresh, bright red often associated with defaecation and can be on wiping post-defaecation or dripping into the toilet. Outlet blood is due to bleeding lower down in the rectum as opposed to altered blood, which is due to bleeding high up in the gastrointestinal (GI) tract. Asking patients to firstly describe the blood they have seen is a good starting point. Patients should then be further questioned about how long they have experienced the bleeding for, when it happens (any time or specifically post-defaecation), what they have tried to relieve it and whether it helped, and whether pain is associated with the bleeding. Gathering this information helps build the clinical picture. Further systematic questioning is then important to establish a diagnosis. Patients should be asked whether:

- There is any other bowel-related history, e.g. how often do they open their bowels
- The stools are hard/soft/liquid
- They notice any blood and colour of the stool
- There has been any change in the last few months
- They have had any abdominal pain. This is then followed by more general questioning about their health, past medical and surgical history and listing any medications. Their social history should also be taken into account and any significant family history and more specifically of GI/bowel-related cancer or inflammatory bowel disease.

Rectal bleeding is a ‘red flag’ sign and one of the referral criteria for 2-week wait to see a specialist initiative. Symptoms which need further investigation include (NHS Clinical Knowledge Summaries (CKS), 2010):

- Persistent change (over at least a 6-week period) in bowel habits, often increase in consistency and frequency
- Unexplained anaemia
- Unexplained weight loss
- Persistent abdominal pain/mass on abdominal examination
- Stool frequency
- Family history of bowel cancer.

Following on from taking a full history, a full
Clinical examination should be carried out, including rectal examination (Hibberts and Bushell, 2007). This rectal examination, rigid sigmoidoscopy and proctoscopy are all important in order to build the clinical picture.

Once all the history is noted and the examination complete, a diagnosis can then be made. The diagnosis may range from benign anorectal conditions such as haemorrhoids, fissure, solitary rectal ulcer syndrome, trauma or due to medication/iatrogenic causes (e.g. excessive anticoagulants or radiation exposure), to colorectal cancer, polyps, diverticular disease or inflammatory bowel disease (including proctitis, Crohn’s disease and ulcerative colitis).

Considering differential diagnoses will guide any other investigations required. For all bleeding, a direct visual investigation is required—this can be both diagnostic or therapeutic. A colonoscopy or flexible sigmoidoscopy is often indicated to ensure there is no other colonic pathology to account for the rectal bleeding. Following investigations and confirmation of the diagnosis, treatment can then be instigated.

### Haemorrhoids

Haemorrhoids, or ‘piles’, are a part of the normal anatomy of the rectum (Quijano and Abalos, 2005). However, these terms are often used for many other problems found in the anus or rectum. It has been estimated that 36.4% of the UK population will have haemorrhoids at some point in their lives (Nisar and Scholefield, 2003). Goligher et al (1984) and Ramalingam and Mortensen (2005) highlighted that the incidence increases with age, suggesting that 50% of people over 50 years will have some degree of haemorrhoids at some point. However, Reese et al (2009) argued that just as many people with haemorrhoids self-treat and may never come into contact with a health professional. While the incidence data is therefore unreliable, it does suggest the scale of the problem.

The anal canal is lined with three fibrovascular cushions of submucosal tissue, held together within the anal canal by connective tissue to the anal sphincter complex. Haemorrhoids originate from the internal venous plexus, which is above the dentate line within the rectum. This connection to the arterial blood supply and communication with the venous supply enables them to swell up and enlarge. These swellings assist in maintaining the fine continence of the anus, in preventing leakage of stool, liquid or gas (Alonso-Coello et al, 2006). It is the disruption of this normal anatomy in the weakening of the connective tissue and the subsequent swelling

### Table 1. Classification of haemorrhoids

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Haemorrhoids which are internal, prolapse into the lumen on proctoscopy, but do not prolapse outside the anus. The patient may complain of rectal bleeding</td>
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<tr>
<td>2</td>
<td>The haemorrhoids prolapse outside the anus on straining and defaecation but reduce spontaneously back inside the anus. The patient may complain of rectal bleeding or the sensation of the prolapsing haemorrhoids</td>
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<tr>
<td>3</td>
<td>Prolapse on straining and require manual reduction, with a finger to push them back inside the anus. The patient may complain of rectal bleeding, sensation of the prolapsing haemorrhoids and inflammation of the haemorrhoidal tissue if not reduced</td>
</tr>
<tr>
<td>4</td>
<td>Prolapsed haemorrhoids which are irreducible therefore remain outside of the anal canal. They may become thrombosed and strangulated. The patient may complain of rectal bleeding, discomfort and pain (if the haemorrhoids are inflamed or strangulated)</td>
</tr>
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and collection of blood in these spaces which can lead to the symptoms of bleeding, prolapse (protrusion from outside the anus), pruritis (itching around the anus) and discomfort.

Haemorrhoids can be classified in a number of ways. However the most common is described by Goligher et al (1984) (Table 1). In this system, the severity of symptoms and the degree of prolapse of the haemorrhoids is taken into account. The prolapse description within the classification relates to the position of the haemorrhoid above or below the dentate line. On proctoscopy it is possible to see the columnar epithelium above this line and then the change to the squamous epithelium below—a clear delineation is evident (Figure 1). Other terms used in defining and classifying haemorrhoids include:

- Internal haemorrhoids—covered by mucous membrane and remain inside the anal canal, originating from the internal haemorrhoidal venous plexus, above the dentate line (Grade 1 or 2)
- External haemorrhoids—prolapse, descend, protrude outside the anal verge, covered by skin (Grade 2, 3 or 4)
- Strangulated haemorrhoids—prolapse and constrict blood flow from the anal sphincter
- Thrombosed haemorrhoids—external haemorrhoids, full of clotted blood.

### Conservative treatment

Once haemorrhoids have been diagnosed and other colonic pathology excluded, treatment can commence. Efficient and non-invasive treatments, often termed ‘conservative’ measures can then be initiated. These include lifestyle changes, including prevention of constipation and subsequent straining on defaecation. Corrective toiletry positioning can help straighten the anorectal angle, as well avoiding sitting on the toilet for long periods to prevent possible or further prolapse and distension. Dietary measures such as increasing the intake of soluble and insoluble dietary fibre and fluid can help prevent constipation. By avoiding constipation and diarrhoea, the size of haemorrhoids can be reduced, limiting patients’ symptoms (Moesgaard et al, 1982; Perez-Miranda et al, 1996; Gearhart, 2004).

Haemorrhoidal creams bought over the counter include a variety of local anaesthetics, corticosteroids and antiseptics. They can help by relieving the inflammation, swelling and discomfort. However, they are not a long-term option and may only provide symptomatic relief if the haemorrhoids are internal and small. Suppositories for haemorrhoids (often containing corticosteroids) may also be helpful for internal haemorrhoids. They can help reduce the discomfort, bleeding and swelling associated with haemorrhoids by relieving inflammation.

#### Invasive/non-surgical treatment

##### Injection sclerotherapy

In this form of invasive management, patients need to lie down on the left lateral side for a per-rectal examination. The haemorrhoids are visualized through a proctoscope and the submucosa at the base of the haemorrhoid is injected with 5% phenol in oil, through a spinal needle, causing tissue necrosis. Injection of haemorrhoids is recommended only for symptomatic grade 1 or 2 haemorrhoids (Madoff and Fleshman, 2004). Complications from injecting can include erectile dysfunction, local infection and abscess formation. Sclerotherapy should not be used if haemorrhoids are infected, inflamed or ulcerated. Sclerotherapy appears to be the least effective invasive treatment for haemorrhoids and is not routinely used anymore (Johanson and Rimm, 1992; MacRae and McLeod, 1997).

##### Rubber band ligation

As with sclerotherapy, patients lie down on their left lateral side and per-rectal examination is conducted. The haemorrhoids are visualized through a proctoscope. The haemorrhoid band is applied either by a Barron’s bander or, more commonly, a suction gun. The suction gun is inserted through the proctoscope and suction is applied to the haemorrhoid. The gun is fired to release the rubber band around the base of the haemorrhoid—this must be performed above the dentate line as the anal mucosa above this line does not contain pain receptors. The band causes the haemorrhoid to shrivel up and drop off eventually. It is important to educate patients following this procedure, including adequate oral analgesia and putting off the urge to defaecate. They need to monitor any blood loss and with
excess rectal bleeding, patients will need to be given emergency contact numbers or be advised to attend casualty for the band to be removed or surgery to stop the bleeding (Scarpa et al, 1988).

**Surgery**

Surgical treatment is indicated in symptomatic, grade 3 or 4 haemorrhoids. Haemorrhoidectomy may be performed under local, regional or general anaesthetic, depending on patient fitness, local resources and surgeon preference.

Open haemorrhoidectomy involves dissecting the haemorrhoid from the underlying anal sphincter complex. This can be done using sharp dissection, electrocauterization, LigaSure system or a harmonic scalpel. Closed haemorrhoidectomy is similar to the open haemorrhoidectomy but the mucosal edges and skin are closed with a continuous suture.

Stapled haemorrhoidectomy is performed using a specially-designed transanal circular staple gun. The gun is used to excise a circumferential ring of mucosa above the dentate line. A literature review of stapled haemorrhoidectomy showed that it is less painful than conventional haemorrhoidectomy and return to normal activities is quicker (Tjandra and Chan, 2007) but long-term follow-up shows that recurrence rates are higher.

The main complications after haemorrhoidectomy include haemorrhage, faecal incontinence, anal stenosis, urinary retention, pelvic sepsis and faecal impaction (Cheetham and Phillips, 2001).

Before undergoing surgery, patients will require a full explanation of the procedure, the risks associated with it and after care. This will be part of the process of gaining informed consent. However, a careful assessment of patients’ expectations after the operation needs to be discussed. Following a haemorrhoidectomy operation, the following issues need to be carefully explained to patients. Postoperative care of the anus and rectum is important. A dressing may be used internally and externally and advice given regarding when and how this can be removed. Patients need to be encouraged in anal hygiene, showering, douching and bathing (with no salt or soap). Patients need to be informed that they may experience some faecal or mucus leakage initially, but as the inflammation reduces, this will resolve. If it does not, patients need to be referred back to see the surgeon.

Patients need to be educated on the prevention of constipation and straining. Laxatives are given for the initial postoperative period but longer-term diet advice is needed to enable the internal wounds to heal and prevent recurrence.

Finally, patients need to be supported with adequate pain control following surgery. Facilitating the passage of stool following anal canal surgery is important to prevent constipation, which will lead to further pain and straining. Research also suggests that the use of metronidazole reduces pain after haemorrhoidectomy (Carapeti et al, 1998), and therefore a balance needs to be ensured between analgesia, laxatives and changes in diet.

**Conclusions**

Any case of rectal bleeding needs to be assessed and a cause established. While haemorrhoids are a main cause of rectal bleeding, more sinister colonic pathology needs to be ruled out.

The majority of patients with haemorrhoids are asymptomatic, but those with symptoms can be treated successfully with conservative therapy, emphasizing adequate dietary fibre and fluid intake to prevent constipation and straining. Those requiring surgical intervention should be aware of the complications and risk of recurrence. It is also important to commence the conservative therapies in this group of patients as well to minimize the risk of recurrence.

Developing an understanding of haemorrhoidal disease and the various treatment options available will aid in the delivery of effective patient care. Knowledge of the risks of intervention, possible alternatives and postoperative care allows for optimal patient care.

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