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Bloody diarrhoea

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Management of bloody diarrhoea depends on the underlying cause but the cornerstone of therapy is adequate rehydration.

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Diarrhoea is a common complaint in our community and bloody diarrhoea is an important subset that has a range of aetiologies. Recognition of the common and serious possible causes is paramount to facilitating appropriate evaluation and management.

REMEMBER

- The estimated incidence of gastroenteritis in Australia is 17 million cases per year, with approximately 41,000 annual hospital admissions.[1]
- Of these cases, approximately 3% have bloody diarrhoea.[2]
- Bloody diarrhoea implies visibly gross blood in predominantly liquid stool. It is important to distinguish it from traumatic forceful defaecation in nonbloody diarrhoea and frank gastrointestinal bleeding.
- The causes of bloody diarrhoea are summarised in the box on page 64. Most cases of acute bloody diarrhoea are infective in nature, particularly in children.[3] Enterohaemorrhagic *Escherichia coli* (serotype O157:H7) is an important consideration because of its association with the haemolytic uraemic syndrome.
- As the duration of bloody diarrhoea increases, noninfectious causes become more likely.

ASSESSMENT

- The history should focus on identifying the onset, duration and nature of diarrhoea, associated abdominal or rectal pain, vomiting and fevers. A detailed exploration of travel, food consumption, medication usage and ill contacts is essential.
- Examination needs to establish whether haemodynamic instability, peritonism, abdominal distension or masses are present.
- Clinical clues to the cause in a patient presenting with bloody diarrhoea are listed in the Table.
- Patients with bloody diarrhoea need further investigations and possible hospital admission, particularly if there has been recent antibiotic use or hospitalisation, the patient is immunocompromised or elderly or the following are present:[4]
  - hypovolaemic shock

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CAUSES OF BLOODY STOOLS

Infections – traveller, immuno-compromised, institutionalised

Bacterial
- *Shigella*
- *Campylobacter jejuni*
- *Escherichia coli O157:H7* and other Shiga toxin-producing *E. coli*
- *Salmonella*
- *Vibrio parahaemolyticus*
- *Yersinia*
- *Aeromonas*
- *Clostridium difficile* (rare)

Parasitic
- *Entamoeba histolytica*
- Schistosomiasis

Viral
- Cytomegalovirus

Inflammatory
- Inflammatory bowel disease

Vascular
- Ischaemic colitis
- Radiation colitis

Neoplastic
- Colorectal carcinoma

Anatomical
- Ulceration
- Diverticular disease

Medications
- NSAIDs
- Chemotherapy

Systemic
- Vasculitis
- Bleeding disorders

TABLE. CLINICAL CLUES TO CAUSE OF BLOODY DIARRHOEA

Presentation	Possible aetiology
Children with acute watery diarrhoea turning bloody, especially without vomiting	Bacterial infection (consider *Escherichia coli* O157:H7)
Patients with acute bloody diarrhoea (less than 14 days' duration)	Likely infective aetiology
Young patients with persistent bloody diarrhoea and constitutional symptoms	Inflammatory bowel disease
Traveller	Amoebiasis, schistosomiasis, typhoid fever, rarely enterotoxogenic *E. coli*
Older patients with predominantly frank, painless bleeding	Angiodysplasia, diverticular bleeding, neoplasia, haemorrhoidal bleeding
Older patients with predominantly frank bleeding with abdominal pain	Ischaemic colitis
Patients who have consumed raw milk products, undercooked beef	*E. coli* O157:H7
Patients who have consumed raw shellfish	*Vibrio parahaemolyticus*

  - fever
  - significant abdominal pain
  - more than six unformed stools per 24 hours or illness for longer than 48 hours.
- Stool cultures are the initial investigation of choice, keeping in mind that testing for *E. coli* toxins and *Yersinia*, *Clostridium difficile*, parasitic and many other infections needs to be specifically requested.
- Laboratory tests should exclude electrolyte derangement, inflammation, thrombocytopenia/anaemia (haemolytic uraemic syndrome) and, if necessary, relevant infectious serologies (e.g. amoebiasis, schistosomiasis, strongyloidiasis).
- Imaging in the form of a CT scan of the abdomen with oral and intravenous contrast is usually not of benefit in diagnosis apart from in very limited situations. It may identify a local process such a diverticulitis.
- Endoscopic evaluation is not generally required, and should be used judiciously. It is mainly indicated in suspected gastrointestinal bleeding, immunocompromised patients or prolonged disease (Figure).

MANAGEMENT

- Management depends on the underlying cause of bloody diarrhoea. The cornerstone of therapy is adequate rehydration. There are many commercially available oral rehydration solutions available. Sports drinks are not formulated for rehydration in diarrhoea.
- Antimotility agents such as loperamide or opiates should generally be avoided in patients with bloody diarrhoea, especially in children or if certain infections are the cause (e.g. *C. difficile*, enterohaemorrhagic *E. coli*).
- There is no evidence base for probiotic therapy or alteration in diet for patients with bloody diarrhoea.[5]
- Empirical or directed antibiotics are generally of little use other than for moderate to severe symptoms in travellers' diarrhoea, *C. difficile*-diarrhoea, severe bacterial diarrhoea (particularly in infants) and immunocompromised patients.[6] In cases caused by toxin-producing strains of *E. coli*, antibiotic usage may worsen the diarrhoea and increase the likelihood of the patient developing haemolytic uraemic syndrome.[7]

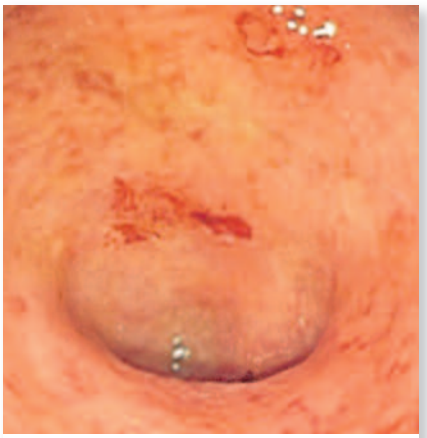

Figure. Endoscopic appearance of ulcerative colitis.

- Contact precautions, isolation and barrier nursing are important in hospitalised and institutionalised patients with infective diarrhoea to prevent further transmission and outbreaks.
- The management of noninfective causes of diarrhoea should be specific to the aetiology.

CONCLUSION

Bloody diarrhoea is an uncommon presentation. The presence of blood in diarrhoea can help to narrow the differential diagnosis of diarrhoea to more specific causes. Management depends on the underlying cause, with rehydration being critical and antibiotics generally playing a limited role. MT

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