

Faecal incontinence

Under-reported, underdiagnosed

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Faecal incontinence is an embarrassing condition that can lead to social isolation and an impaired quality of life. Conservative treatment measures can be trialled but more aggressive management is often needed.

Faecal incontinence is defined as the involuntary, and often recurrent, passage or leakage of stool (solid and liquid) as well as flatus and/or mucus from the anus. Three subtypes exist.

- Passive incontinence – the passage of flatus or stool without warning. Certain neurological disorders, in particular, can result in passive incontinence.
- Urge incontinence – leakage in spite of attempts to retain stool. Sensation is preserved and urge incontinence often occurs in cases of overwhelming diarrhoea and proctitis.
- Faecal seepage – when stool or mucus leaks after a normal bowel action.

Faecal incontinence is not uncommon, occurring in up to 15% of the adult population. It is more prevalent in women than men. However, the prevalence is much higher in geriatric patients, as well as in those in institutions such as nursing homes and it



KEY POINTS

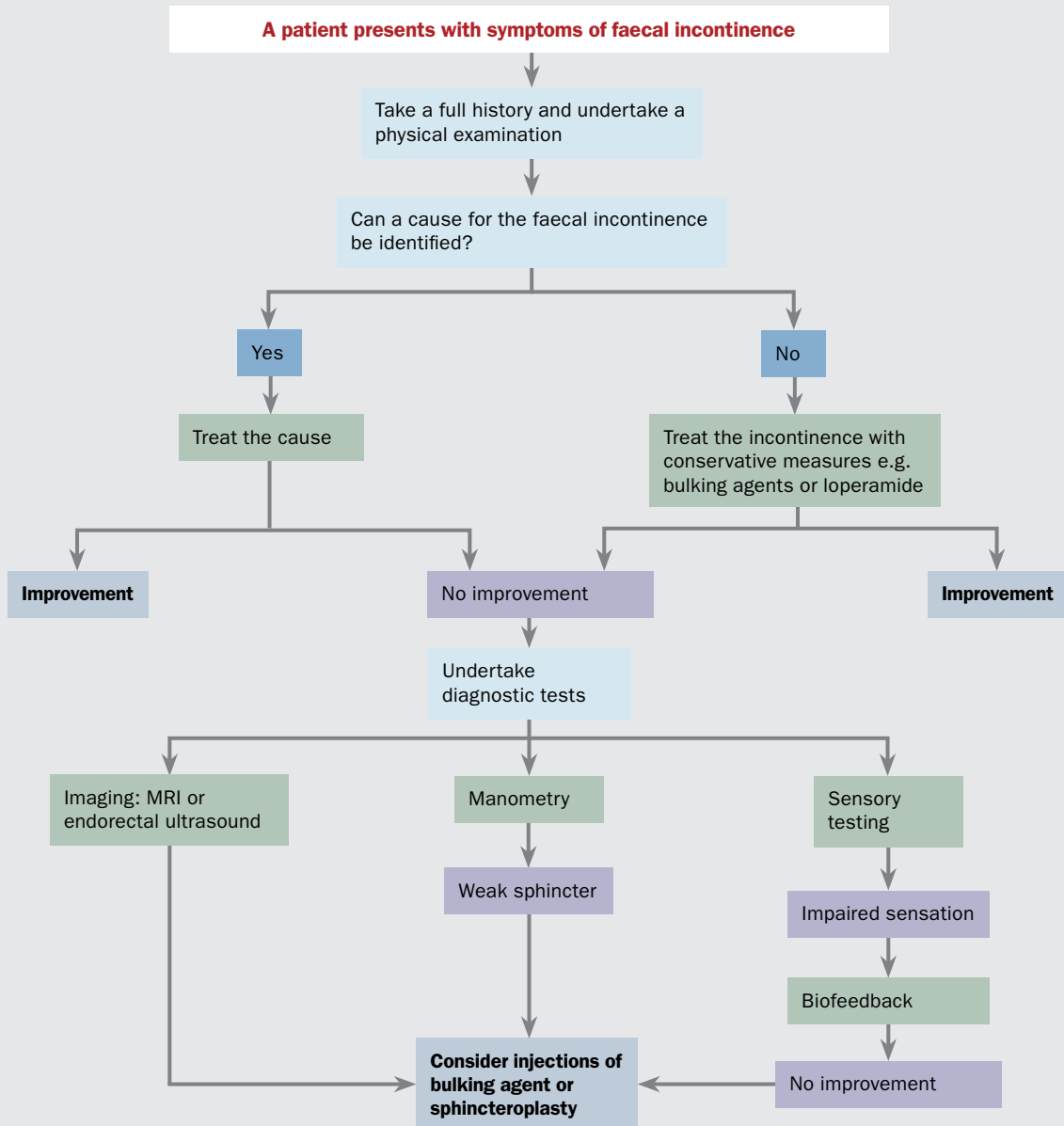
- Faecal incontinence is common and often under-reported.
- It impacts significantly on a patient's quality of life and may result in social isolation.
- Faecal incontinence may occur as a result of neurological conditions, anorectal trauma and conditions such as inflammatory bowel disease, constipation and diabetes.
- Obesity, smoking, cholecystectomy and immobility are risk factors for faecal incontinence.
- A cause for faecal incontinence should be sought. Investigations include endoscopy, manometry and imaging with CT or MRI if indicated.
- Conservative measures, including the use of oral bulking agents, should be trialled initially but may not be successful.
- Pelvic floor exercises, biofeedback and newer treatments such as sacral nerve stimulation and injection of biocompatible materials into the anal sphincter complex may lead to symptomatic improvement.
- Surgery, including colostomy, may need to be considered in severe refractory cases.

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AN APPROACH TO INVESTIGATING PATIENTS WITH FAECAL INCONTINENCE



is one of the main reasons for nursing home admission.

Faecal incontinence may occur as a result of child birth, neurological conditions, anorectal surgery and trauma. Trauma can include damage caused during anal intercourse in both men and women. Other risk factors are smoking, obesity, immobility and previous cholecystectomy.

Faecal incontinence can be associated with constipation as well as diarrhoea and frequently results in embarrassment for

the patient, which may have a significant impact on their quality of life. In addition, embarrassment may lead to self-imposed social isolation and under-reporting of the condition.

A diagnosis of faecal incontinence is based on the patient's history, a physical examination and specialised investigations including imaging and anorectal manometry (see the flowchart above). Therapeutic options include oral bulking agents, antidiarrhoeal medications, physiotherapy and surgery. Also,

1. CAUSES OF FAECAL INCONTINENCE

- Neurological disorders, including multiple sclerosis, cerebrovascular disease, spina bifida, spinal cord injury and dementia
- Constipation or faecal impaction
- Diabetes and scleroderma
- Inflammatory bowel disease
- Overwhelming diarrhoea
- Anorectal trauma e.g. obstetric injuries, anorectal surgery, pelvic radiation and anal intercourse
- Rectal prolapse
- Pudendal nerve injury or neuropathy
- Immobility, obesity, smoking and cholecystectomy
- Idiopathic

the underlying cause needs to be addressed. Newer treatments include sacral nerve stimulation and the injection of biocompatible bulking materials into the anal sphincter complex.

Pathophysiology

Continence depends on:

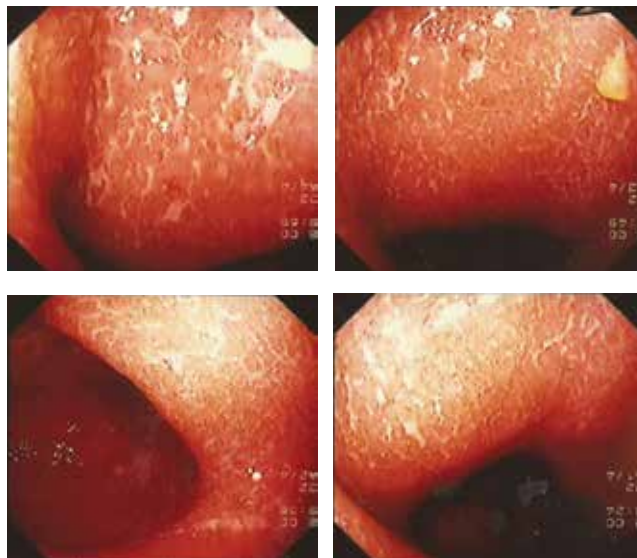
- proper functioning of the anal sphincters – both internal and external
- proper functioning of the puborectalis muscles
- normal anal and rectal sensation
- a compliant or distensible rectum
- an intact nerve supply
- normal cognition.

When stool is present in the rectum, the internal anal sphincter relaxes and the external sphincter contracts. During defaecation, the puborectalis muscle relaxes leading to straightening of the anorectal angle and subsequent descent of the pelvic floor and stool is then expelled. Consequently, any disease or process that interferes with one of these mechanisms can lead to faecal incontinence.

History

Faecal incontinence often leads to soiling of undergarments and may be associated with unpleasant odours. It can impact significantly on quality of life and patients may be too embarrassed to report it to their GP. However, once the presence of faecal incontinence has been established, symptoms relating to an underlying cause should be sought.

A history of urgency and diarrhoea, particularly if bloody,



Figures 1a to d. Ulcerative colitis as seen on colonoscopy.

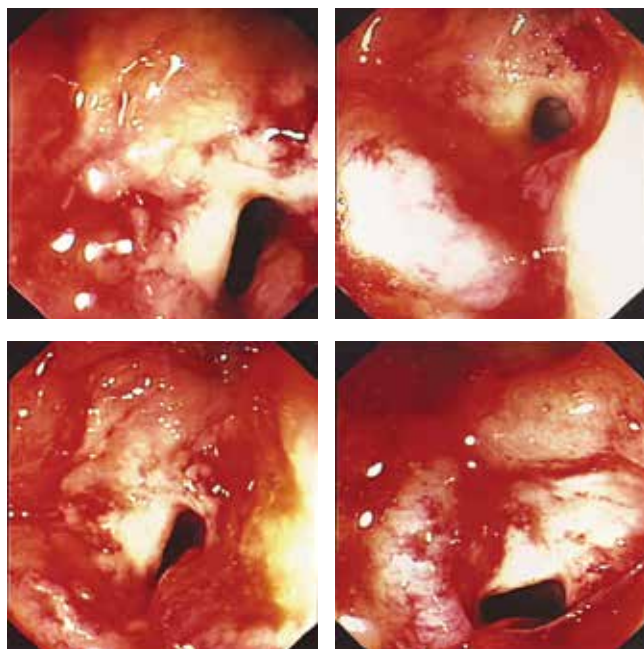
is suggestive of a colitis (Figure 1). Nocturnal faecal incontinence raises the possibility of diabetes, whereas coexistent urinary incontinence points to a neurological cause such as a spinal cord lesion. Constipation resulting in faecal impaction suggests overflow incontinence and risk factors for this include reduced mobility, dementia and a poor fibre and fluid intake.

An obstetric history should be obtained from all women experiencing faecal incontinence, particularly with regard to the use of forceps during labour and if any perianal injury was sustained. A previous history of surgery to the anus and/or rectum and previous pelvic radiotherapy is also important and the patient should be asked about the presence of rectal prolapse. Questions relating to sexual practices, especially anal intercourse, may also be relevant.

Several scoring systems have been developed to assess the severity of faecal incontinence and the efficacy of treatment. The most widely used is the Cleveland Clinic Faecal Incontinence Score, which measures the frequency of incontinence and the impact on the patient's life.

Examination

A thorough physical examination should be performed after taking a full patient history. It is important particularly to exclude neurological disease and the other causes of faecal incontinence listed in the box. The perianal area and perineum must be examined for scars, fistulae and prolapse. Sensation of the perianal area should be tested and a digital examination of the rectum should be performed to exclude any masses and constipation. Anal tone can also be assessed crudely at the time of digital rectal examination.



Figures 2a to d. Obstructing rectal cancer as seen on colonoscopy.

Investigation

When diarrhoea is present, investigation needs to be directed at this and may include thyroid function tests and stool microscopy and culture, in addition to sigmoidoscopy or colonoscopy to exclude inflammatory bowel disease and a malignancy (Figure 2). A plain abdominal x-ray may demonstrate faecal loading.

More specialised investigations include anorectal ultrasound and manometry, although these are best undertaken in a unit with expertise in these procedures. Generally, these tests are carried out if initial management strategies have failed. Anal sphincter dysfunction can be assessed by manometry and inflating a rectal balloon can assess rectal sensation.

Endorectal ultrasound and MRI are useful for detecting structural abnormalities of the anal sphincters, puborectalis muscles and rectal wall. Occasionally, defaecography using a contrast medium such as barium is employed, particularly in patients with refractory faecal incontinence in whom surgery is being contemplated. An alternative is MRI defaecography, which avoids radiation and allows the soft tissue around the rectum and anal canal and the anal sphincters to be better visualised. Additional investigations include a balloon expulsion test (useful in patients with overflow faecal incontinence secondary to faecal impaction) and electromyography (especially in patients with suspected neurogenic sphincter weakness).

Management

Therapy needs to be individualised and the aim is to improve continence and subsequently the patient's quality of life.

Supportive measures

Supportive measures are important and include the use of incontinence pads and care of the perianal skin. Barrier creams containing zinc oxide are useful and antifungal agents may be necessary. Consumption of caffeinated food and drinks, alcohol and sugars such as lactose and fructose that are not completely digested should be avoided in cases of diarrhoea-associated faecal incontinence. Fibre and fluid intake should be reduced if excessive or increased in patients with constipation-associated faecal incontinence.

Pharmacological therapy

Reducing stool frequency and improving stool consistency are the mainstays of medical therapy.

Bulking agents containing psyllium may improve stool consistency particularly in those whose stools are loose. In the presence of diarrhoea, the underlying cause needs to be treated if identified.

Loperamide can often be beneficial as it reduces stool frequency and increases anal sphincter tone. Faecal disimpaction may be necessary in cases of overflow incontinence when laxatives and enemas have failed. Constipation also needs to be investigated and treated accordingly.

When patients fail to respond to these measures, specialist referral should be considered to try and identify any structural and functional abnormalities causing faecal incontinence.

Exercise and biofeedback

Exercises can be useful to strengthen the pelvic floor muscles. Biofeedback techniques are employed to retrain the muscles of the pelvic floor and abdominal wall and can be used to enhance rectal sensation, as well as contraction and co-ordination of the external anal sphincter. Biofeedback is a noninvasive method that should be offered to motivated patients before surgical therapy. It may improve urge symptoms and passive incontinence in up to 70% of cases. However, it is of no benefit to patients with spinal cord injuries who lack rectal sensation and cannot contract the sphincters voluntarily.

Both pelvic floor exercises and biofeedback are best undertaken by an experienced physiotherapist with a special interest in faecal incontinence.

Other treatments

Disposable anal plugs can be used at times to control leakage by occluding the anus. They are of particular benefit in patients with neurological conditions and when anal sensation is impaired. A recently described therapy for the treatment of patients with faecal incontinence is the injection of biocompatible bulking agents into the anal sphincter or submucosa to enhance the anal resting pressure. An example of a bulking agent used is dextranomer in solubilised hyaluronic acid and the procedure can be carried out on an outpatient basis.

Sacral nerve stimulation involves the insertion of electrodes into the sacrum to provide low-grade electrical stimulation and enable defaecation to be postponed. Although it is not clear how sacral nerve stimulation works, it is of most benefit in those with faecal incontinence secondary to neurological disorders.

Radiofrequency ablation where radiofrequency energy is delivered to the anorectal junction has also been used but results have been conflicting.

Surgery

Surgical therapy is indicated when rectal prolapse is present or when the anal sphincter has been disrupted and medical therapy has failed. Examples of surgical procedures available include sphincteroplasty and implantation of an artificial anal sphincter. The aim is to improve function through restoring anatomy but these procedures are not without complications and long-term data are disappointing.

Graciloplasty, where the gracilis muscle is transposed around the anal canal, aims to increase sphincter tone. When intractable symptoms are present, a colostomy or ileostomy should be considered, particularly when all other therapies have failed.

Prognosis

The prognosis depends on the underlying cause and severity of faecal incontinence. Mild cases often respond to pharmacological therapy, pelvic floor exercises and biofeedback, which can often lessen symptoms and improve quality of life. In severe refractory cases, surgery such as a colostomy to divert the faecal stream may be necessary.

Conclusion

Faecal incontinence is not uncommon but often is under-reported because of embarrassment and this may delay the diagnosis. Causes of faecal incontinence include dementia, anorectal trauma, constipation and neurological disorders, and appropriate investigations should be carried out to identify any abnormalities.

Treatment should be directed at the underlying cause with other management including a fibre supplement, antidiarrhoeal agents, sacral nerve stimulation and even surgery. **MT**

Further reading

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COMPETING INTERESTS: None.

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