Faecal incontinence: causes, assessment and management


Abstract

Faecal incontinence can be a debilitating, distressing and isolating condition that affects individuals’ quality of life. This article discusses the definition, prevalence and causes of faecal incontinence, emphasises the importance of assessment and examines how this stigmatising condition affects adults. Once a differential diagnosis is made, an appropriate patient-centred treatment plan can be established to improve the individual’s symptoms.

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Faecal incontinence can have a significant effect on individuals’ lives. It is a heterogeneous problem that ranges from minor faecal soiling to incapacitating urge incontinence or passive faecal incontinence (Ahmed et al 2010). Individuals with faecal incontinence often do not seek help because they have insufficient knowledge of available treatments or are embarrassed (Uludağ et al 2011). Some individuals believe that faecal incontinence is a normal part of the ageing process and therefore do not seek help (Allison 2010).

Bowel control is not something that most people have to think about consciously, but for those with faecal incontinence this is not the case. They are acutely aware of bowel control and are conscious of where the nearest toilets are when away from home – a process known as ‘toilet mapping’ – to reduce the risk of an bowel accident. Individuals with faecal incontinence may not tell others about their problem and may attempt to conceal it by hiding their incontinence pads, wearing darker clothing so that if they soil themselves it will not show, and toilet mapping. People may feel ashamed and disgusted by the condition and that some healthcare professionals do not take them seriously, are dismissive and neglect their problem (Rasmussen and Ringsberg 2009).

It is important that healthcare professionals actively, but sensitively, enquire about symptoms of faecal incontinence in high-risk groups, such as women following childbirth or individuals with a neurological condition, and that they take account of the possible physical and emotional effects (National Institute for Health and Clinical Excellence (NICE) 2007). However, embarrassment and lack of knowledge may prevent some healthcare professionals from asking about faecal incontinence because they fear they may not be able to deal with the patient’s response.

An article written by a registered nurse shows how faecal incontinence can affect an individual’s life (Anonymous 2009). The nurse wrote that: ‘Over time the faecal incontinence problem became increasingly difficult to cope with. I was successful in applying for a post that required me to travel. I had to pack extra toilet roll as well as my own towels and extra underwear. I had to plan everything I did. I noticed that I had no control over gas leakage; this was not only embarrassing at home but also at work and socially. I felt disgusted with myself and started to feel helpless.’

Prevalence

Many studies have examined the prevalence of urinary incontinence but, until the past 10-15 years, data on the prevalence of faecal incontinence has been lacking (Bliss and Norton 2010). An assumption has been made...
that faecal incontinence is more common in women than men, particularly women under 65 years. Women may be at higher risk of faecal incontinence as a result of pregnancy and obstetric trauma (Nelson 2004) and may be more likely to report the problem to healthcare professionals (Nelson et al 1995). However, some population surveys have shown a high prevalence of faecal incontinence in males (Nelson 2004), and others found no difference in prevalence between men and women over 40 years (Ahmed et al 2010). The estimated prevalence of faecal incontinence is 1-15% (Macmillan et al 2004, Nelson 2004, NICE 2007). However, the prevalence of faecal incontinence in nursing homes is much higher (10-50%), which could be because people are often admitted to these homes because they or their carers are no longer able to cope with faecal incontinence (Nelson 2004).

**Definition, anatomy and physiology**

Faecal incontinence can be defined as the involuntary loss of rectal contents (liquid, gas or solid) through the anal canal, resulting in a social or hygiene problem (Norton et al 2010). Alternatively, faecal incontinence can be defined as ‘any involuntary loss of faecal material’ and anal incontinence as ‘any involuntary loss of gas/flatus’ (Abrams et al 2009). By adulthood, defecation has usually become a subconscious process, although it is still a voluntary function (Norton 2004).

Faecal incontinence is a symptom, not a disease, and has many contributory factors. To understand the causes of faecal incontinence it is important first to study the normal anatomy and physiology of the rectum and anal sphincters, and understand how continence is maintained.

**Anal sphincters**

The two anal sphincters are simple muscle structures that perform a complex function (Emmanuel 2004) (Figure 1). The internal anal sphincter is a smooth muscle that is under involuntary control. Therefore, weakness of the internal anal sphincter may result in passive faecal incontinence, where the individual is not aware of the incontinence episode. The external anal sphincter is a striated muscle that is under voluntary control. Weakness of the external anal sphincter could result in urge incontinence, where the person needs to get to a toilet urgently and may have a bowel accident if he or she does not get there in time.

There are four main reflex actions that control defecation. The gastrocolic reflex is initiated when food or drink enters the stomach and sets off contractile movement of the upper and lower gastrointestinal tracts. The anal reflex occurs when the anus contracts on touch and then relaxes. When carrying out a digital rectal examination, this reflex can be used to allow easier insertion of a finger for examination. The closing reflex is when the external anal sphincter closes at the end of rectal evacuation. Individuals can enhance this reflex by squeezing this sphincter at the end of defecation. The rectoanal inhibitory reflex occurs when the rectum becomes distended, the internal anal sphincter relaxes and the external anal sphincter contracts. The rectoanal inhibitory reflex lasts less than ten seconds, allowing the anal canal to distinguish solids from liquids and flatus, which is important in the maintenance of continence.

The integrity of the anal sphincters is important for maintaining faecal continence, but pelvic floor muscles, anal cushions (subepithelial tissue mass that seals the anal canal and helps to maintain continence), nervous system control of the anal canal and pelvic floor, consistency of faeces and a compliant no-diseased rectum all have a role. A complex interplay of these factors maintains faecal continence and problems with any of these factors can lead to incontinence (Ahmed et al 2010).

**Causes and contributory factors**

There are many causes of faecal incontinence, which vary depending on the age and sex of the person. The cause can usually be identified according to symptoms, type of leakage and the complex interplay of contributory factors (NICE 2007).
In women, the most common cause of faecal incontinence is the disruption of the anal sphincters during childbirth, which can result in either urge or passive faecal incontinence of varying severity (Nelson 2004). Incontinence can often be exacerbated if the stool consistency is 5 (soft blobs with clear cut edges passed easily) or 6 (fluffy pieces with ragged edges a mushy stool) on the Bristol Stool Form scale (Heaton et al 1992), making bowel movements more difficult to control. Many women use diet or medication to modify stool consistency to improve their control of incontinence and enable them to conceal their symptoms.

Faecal incontinence in men is commonly associated with prostate cancer, symptomatic haemorrhoids, perianal sepsis, rectal cancer and a history of restorative rectal resection (Kim et al 2007). As already discussed, faecal incontinence is more prevalent in older people. One of the causes for this could be degeneration of the smooth muscle of both the internal and external anal sphincter (Vaizey et al 1997), and comorbid disease such as Parkinson’s disease or diabetes (Nelson 2004). In addition, the amount of medication taken tends to increase as people age. These medications may have associated side effects (Box 1). This may make bowel movements, such as diarrhoea or constipation, more difficult to control, which in turn, may result in impaction and overflow diarrhoea. Other causes of faecal incontinence, of which there are many, may include:

> Age.
> Obstetric injury.
> Sphincter disruption following anal surgery such as haemorrhoidectomy, fistula repair or sphincterotomy.
> Trauma to the anal area.
> Congenital defect.
> Idiopathic degeneration.
> Neurological conditions such as Parkinson’s disease, multiple sclerosis or stroke.
> Diabetic neuropathy.
> Spinal cord injury.
> Faecal impaction.
> Rectocele or rectal prolapse.
> Chronic pancreatitis, irritable bowel syndrome, traveller’s diarrhoea and running.

It is important when making a diagnosis and establishing the cause of faecal incontinence that ‘red flag’ symptoms of bowel cancer are not overlooked. These include a change in bowel habits in the past three months; blood mixed in with the stool; extra mucus and wind not associated with any lifestyle changes; unintentional weight loss; anaemia; and family history of bowel cancer. An individual with any of these symptoms should be referred to the appropriate service for further investigation (NICE 2011).

It is important to avoid making simplistic assumptions that causation is related to a single primary diagnosis, known as diagnostic overshadowing (NICE 2007). For example, urge faecal incontinence in a female with multiple sclerosis could be a result of her neurological disease, but could also be because she has a sphincter defect caused by childbirth (Ness 2008).

**Assessment and diagnosis**

Before a cause of faecal incontinence can be determined and a differential diagnosis established, a thorough assessment needs to be carried out by an experienced healthcare profession who has the knowledge, skills and clinical experience in assessing bowel dysfunction. Effective assessment provides the relevant information on which to base advice and interventions, measure outcomes and evaluate care. Poor assessment may lead to unnecessary treatment or inappropriate reliance on expensive and undignified containment methods (Kyle 2010).

Assessment should include the use of any incontinence products (Apau 2010). Individuals should not be given pads for incontinence without first being competently assessed so that a cause...
can be established and treatment initiated where possible. The estimated cost of absorbent products for incontinence in the UK is around £94 million a year (Fader et al 2008).

When carrying out an incontinence assessment, healthcare professionals need to gain consent from patients, be proactive in their approach and have a positive attitude (NICE 2007). Skills for Health (2010) outlined the level of competence required of healthcare professionals and identified performance criteria for carrying out a continence assessment. A condition-specific history should be obtained along with clinical examination and assessment of how faecal incontinence affects the individual’s lifestyle and quality of life.

Kapoor et al (2007) reported that, of 113 women presenting to a multidisciplinary pelvic floor clinic with urinary incontinence, 33 also had faecal incontinence. Therefore it is important that the assessor is empathetic and aware of the possible physical and emotional effects of faecal incontinence (NICE 2007), establishing a trusting relationship to enable the patient to discuss the embarrassing aspects of his or her symptoms.

Factors that need to be taken into consideration during the assessment of faecal incontinence are listed in Box 2.

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**Initial management**

Once a cause and a differential diagnosis have been established through the assessment process, a management plan can be initiated. As faecal incontinence is a functional gastrointestinal disorder, it requires a symptom-based, rather than a traditional disease-based approach (Drossman and Dumitrascu 2006). Therefore a structured approach to management is needed. Reversible factors, such as faecal impaction, treatable causes of diarrhoea (infection) or rectal prolapse, should be addressed first before proceeding to the symptoms that are most bothersome to the individual (NICE 2007).

It is not always possible to cure faecal incontinence completely, so it is important to educate the individual about the causes of his or her condition and explain that the aim of treatment is to improve symptoms and enable him or her to manage symptoms more effectively. Patients and carers with good knowledge of faecal incontinence tend to have better outcomes (Norton et al 2010). Patients often have preconceived ideas about what might be the cause of their incontinence, such as cancer. It often helps to explain the likely cause and that symptoms can be improved by behavioural and dietary changes (Ness 2008).

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**BOX 2**

**Condition-specific assessment criteria**

- Relevant medical, surgical, neurological and obstetric history.
- Psychological history, including any history of abuse.
- Body mass index and smoking status.
- Cognitive assessment – this is essential when assessing the older person so that an appropriate treatment or management plan can be devised.
- Duration of the problem – it is important to ascertain if it has been going on for many years, but the individual has not sought help until now, or if it is an acute problem that has begun in the past three months.
- General clinical and anorectal examination – this should include a visual inspection of the anal area for any abnormalities, digital rectal examination to establish the strength of the internal and external anal sphincters, and assessment of skin condition.
- Medication – this should include oral and rectal (prescribed or over-the-counter medications), vitamins, herbal medications, creams and alternative remedies (such as homeopathic medications or preparations from a health food shop).
- Symptoms – it is important to ascertain the type of incontinence (passive or urge), incomplete emptying, flatus control, abdominal pain, anal irritation and passing blood or mucus.
- Evacuation difficulties.
- Food diary to establish a baseline and any triggers.
- Stool diary, including frequency, stool consistency and when incontinence occurs.
- Mobility and toilet access – there may be a functional problem that is causing the incontinence (for example, the patient’s toilet is upstairs and he or she has trouble using the stairs, or the patient walks with a stick or frame and is unable to get to the toilet quickly).
- Triggers – it is important to identify what makes the problem worse or better.
- Coping strategies – this should include how the patient manages the problem (for example, by not eating if going out or wearing a pad).

Lifestyle, dietary and fluid changes

Individuals with urge faecal incontinence sometimes avoid eating or drinking when they are away from home as this can make their problem worse and cause a bowel accident. The healthcare practitioner should address the individual's bowel habit, aiming for ideal stool consistency and satisfactory bowel emptying at a predictable time (NICE 2007). Individuals can be encouraged to work with the gastrocolic reflex by emptying their bowels about half an hour after meals, ensuring that toilets are private, comfortable and can be used without interruption. Correct positioning on the toilet (feet elevated on a stool to ensure that the knees are above the hips, leaning forward in between the knees with the back straight and the lower abdomen bulged) is important to ensure complete emptying of the bowel, thereby reducing the risk of passive faecal incontinence.

When changing diet and fluids to promote an ideal stool consistency, healthcare practitioners need to take into account existing therapeutic diets (for example, diabetic diets) and ensure nutritional intake is balanced. A baseline food and trigger diary can help patients to identify how their food and fluid intake can exacerbate incontinence (Box 3). Patients should modify one thing at a time so that what helps and what does not can be ascertained. Intolerance to wheat and trigger foods such as white bread, pasta and rice, which may help thicken the stool, should be avoided.

Avoid onions, mushrooms and green vegetables as these not only increase transit speed but also increase flatulence. Avoid liquorice, chocolate and dried fruit as these have a laxative effect. Avoid spicy foods or those containing monosodium glutamate (such as Chinese food) as these may make the stool looser. Consider marshmallows, jelly, apple sauce, tapioca, white bread, pasta and rice, which may help thicken the stool. Avoid drinking ‘diet’ fizzy drinks and sugar-free products because the sweeteners used, for example sorbitol, can cause diarrhoea and may also increase flatulence.

Pharmacological interventions

Lifestyle, dietary and fluid changes should be tried before resorting to medication, however pharmacological intervention can be used with these changes. The medication of choice to modify stool consistency is Imodium syrup as this can be easily titrated as necessary. A small amount (0.5-1mg a day) can be effective and is often sufficient; the dose can be gradually increased up to a maximum of 16mg a day if required (NICE 2007). Approximately £3.5 million was spent on Imodium preparations in England in 2009 (The Health and Social Care Information Centre 2010). However, it is imperative that impaction with overflow is ruled out before using Imodium.

Very low doses of tricyclic antidepressants, such as amitriptyline, can be used to decrease symptoms of urgency and urge faecal incontinence. The anticholinergic effects of amitriptyline can prolong intestinal transit time and promote re-absorption of fluid from the stool, thus improving stool consistency (Santoro et al 2000). If antidepressants are prescribed it is important to inform the patient that the medication is being used to improve bowel symptoms and not for its antidepressant effect.

Other medications that can be used include antispasmodics to reduce pressure in the bowel and reduce urgency, Lactobacillus acidophilus to promote bowel health and introduce healthy bacteria, and agents to give more bulk to loose stools. Glycerine suppositories can be used if the individual has a feeling of incomplete emptying and/or passive faecal incontinence after defecation. Ideally, suppositories should be inserted straight after opening the bowels to aid complete emptying.

Non-pharmacological management and coping strategies

It is not always possible to cure faecal incontinence, so patients need to be taught coping strategies to help them manage their symptoms. Advice could include the following areas:

- Best cleaning techniques: use a moist cloth rather than dry paper for wiping, shower the anal area or use a bidet. This reduces the risk of skin damage and cleans faecal matter from creases around the anal area.

- Perineal skin care: clean, moisturise and protect the skin to avoid skin breakdown (Beeckman et al 2009).

- Anal plugs: these can be used to stop leakage in patients with passive faecal incontinence. They are useful in some patients, but unacceptable to others (Deutekom and Dobben 2005).
Incontinence pads: most pads are designed for urinary rather than faecal incontinence so it is important that the pad fits correctly. Passive leakage can be managed with a panty liner held in position by thong-type underwear (MacKenzie and Clubb 2007).

Skincare kits: these may contain spare underwear, moist cloths and disposal bags and may be useful if the individual has had a bowel accident away from home.

Strategies to manage symptoms when travelling: Imodium can be taken before going on a long journey where toilets are unavailable or unsatisfactory.

Provision of a RADAR key: this provides access to many locked toilets. Also, consider toilet ‘urgent’ cards (Wilson 2007).

A faecal collector or bowel management system: this could be used to contain faecal matter and reduce the risk of skin breakdown, particularly in patients who are bedbound or in critical care. It is important to note that while coping strategies are helpful, some patients will require specialist management (Box 4).

**Specialist management**

Individuals who continue to have episodes of faecal incontinence after initial management

**References**


Macmillan AK, Merrie AEH, Marshall RJ, Perry BR (2004) The prevalence of fecal incontinence...
Conclusion

Faecal incontinence is a distressing, embarrassing and potentially life-changing condition that affects individuals’ quality of life. The aim of care is to improve symptoms and make individuals feel more in control. This can only be done after a thorough assessment has been completed to establish the cause and differential diagnosis.

Following assessment, a patient-centred management plan can be initiated, starting with simple conservative management and moving on to specialist management if symptoms of faecal incontinence persist. Nurses, both general and specialist, are well placed to manage the care of these individuals in all healthcare environments, thereby improving their quality of life.

should be considered for specialist interventions (NICE 2007) and further specialist investigations, such as endo-anal ultrasound and ano-rectal physiology tests to detect motor and sensory dysfunction (Bliss and Norton 2010) or surgery (Box 4). Colorectal nurse specialists who specialise in bowel dysfunction can provide this management and offer knowledgeable assessment and an individual treatment programme that aims to alleviate symptoms, improve coping strategies, and reduce the psychological and social effects of faecal incontinence (Allison 2011).


Does the St. Mark’s incontinence score reflect patients perception? A review of 390 patients. Disease of the Colon and Rectum. 51, 4, 436-442.


