

Approach to the treatment of faecal incontinence and external full thickness rectal prolapse

Dorin Ziyaie

Abstract

Faecal incontinence and rectal prolapse remain common clinical conditions, where treatment and management remain a challenge for the patient and the clinician. The two conditions comprise an area where no two patients could be managed the same, each needing personalized tailored approach. Over the past decade there has been an influx of interest in managing patients with these very debilitating conditions, both in terms of surgical techniques, device, subspecialist training and multi-disciplinary approach. These coupled with reduction in stigma traditionally associated with the two conditions have encouraged patients to come forward and the health professional to develop a focused interest.

Keywords Conservative treatment; faecal incontinence; rectal prolapse; surgical treatment

Faecal incontinence

Faecal incontinence (FI) is described as the 'involuntary loss of stool or soiling at a socially inappropriate time or place'. It is a common condition affecting 2% of the population and all ages. Whilst predominantly seen in females it is also increasingly seen and admitted in the male population. The condition poses a serious physical and psychological disability, social isolation and loss of independence. It is synonymous with economic burden for the patient and the healthcare system.

Clinical approach to FI

A detailed clinical history is pivotal to deduce the correct aetiology and exclude concomitant disease (Box 1). This is to be followed by detailed clinical examination (Box 2) and targeted investigations. It is essential that appropriate questions are asked to establish subtypes of FI that could exist in isolation or in combination. These are urge, passive and post defaecation leak.¹ It is only then that an appropriate management plan is tailored

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Aetiological factors in FI

- Functional disorders of the anorectum
 - Anatomical
 - Sphincter disruption/obstetric trauma
 - Anal/perianal/pelvic (anterior resection syndrome) surgery
 - Full-thickness rectal prolapse
 - Mucosal/haemorrhoidal prolapse
 - Disorders of evacuation (rectocoloe/enterocoloe/internal intussusception/dyssynergia) and slow transit constipation
 - Physiological
 - Abnormal stool consistency
 - Sphincter dysfunction
 - Rectal reservoir dysfunction
 - Sensory dysfunction
- Acquired
 - Local organic pathology
 - Proctitis (Inflammatory Bowel Disease, Radiation)
 - Neoplasm
 - Stricture (Radiation, Inflammatory, Iatrogenic)
 - Fistulae
- Congenital
 - Spina bifida
 - Hirschsprung disease
- CNS/Cognitive disorders

Box 1

Detailed clinical examination

- Patulous anus
- Scars (Previous surgery, episiotomy, radiation)
- Purulent/faeculent discharge
- Sinuses
- Fistulae
- Perianal skin/anal lesions (neoplasm, warts, BCC, SCC, melanoma, hidradenitis suppurativa)
- Prolapse (Full thickness rectal prolapse, mucosal prolapse, external haemorrhoids)
- Skin tags/fibro-epithelial polyps

Box 2

for individual patients. Blanket approach to all could only result in an overall poor treatment outcome.

It is of paramount importance to firstly appreciate that whilst the 'Cause – Effect' relationship may be very evident, at the same time symptoms may appear many years later where the clarity of association between cause and the outcome is lost. Secondly, whilst the patient may not be volunteering recent or indeed long-standing symptoms of obstructive defaecation (ODS), again the detailed clinical history should include questions that lead to evacuation disorders. Passive, overflow or post-defaecation leakage secondary

to disorders of rectal evacuation are known phenomena that could mask ODS as the prime cause for FI² (Box 1).

Investigations

Anal sphincter morphology using endo-anal ultrasonography and physiology with anorectal manometry would determine anatomical and functional integrity of the sphincter mechanism respectively. The latter is complemented by the assessment of the pudendal nerve function and assessment of rectal 'reservoir' function (sensation, compliance, capacity). Assessment of rectal evacuation with defaecating proctography, dynamic MRI and gastrointestinal (GI) primary motility studies, such as large bowel transit studies, would determine if FI is attributed by ODS as the underlying cause. In the absence of specialist radiological investigations examination under anaesthesia (EUA) would offer invaluable information particularly for subtle occult conditions such as low internal rectal intussusception or rectocele.

Endo-anal ultrasonography

Rotating hand-held ultrasound probe using a continuous pull through mechanism provides a high-resolution 2D and in more advanced setting 3D images of the sphincter complex demonstrating both the internal and the external anal sphincters. Defects of the sphincter as well as attenuation, scarring and thickness could be demonstrated.

Anorectal manometry/electrosensitivity/electrophysiology

This comprises detailed and focused physiological assessment of the sphincter function characterizing functional deficit, presence or absence of anorectal reflexes, anal mucosal electro-sensitivity, rectal sensory function, compliance and pudendal nerve terminal latency (Box 3).

Specific radiological investigation

If co-existing ODS is suspected to either partially or fully contributing to FI, defaecating proctogram and dynamic MRI could provide pivotal objective evidence. Whilst the former deemed to be adequate in assessment of posterior pelvic compartment it does not provide tri-compartmental information that is provided by the dynamic magnetic imaging.³ Colonic transit study either by the use of radio-opaque markers or radio-isotopes would assess global colonic inertia or segmental slow transit confirming constipation as a contributory factor with or without problems of evacuation.

Management

In the absence of associated symptoms suggestive of organic bowel pathology combined with thorough general and abdominal examination, the nature of the incontinence (flatus/fluid/faeces), severity (assessed by severity scores and patient diary) and impact on the quality of life (QOL questionnaires) would have to be established.⁴

Conservative measures

Management of pelvic floor dysfunction is one area that conservative non-operative techniques bear an important role not only as important adjunct to treatment, but also in many cases as the definitive radical treatment plan (Box 4). Multidisciplinary

Parameters assessed during anorectal manometry

Anal sphincter function

- Internal (resting) anal sphincter (IAS) pressure
 - Intra-rectal pressure (IRP) minus maximum anal sphincter pressure (ASP) at rest
- External (squeeze) anal sphincter (EAS) pressure
 - Intra-rectal pressure (IRP) minus highest recorded ASP at squeeze
- Functional length of the anal canal
 - Length of the anal canal (AC) where IAS pressure > rectal pressure by 5 mm Hg or
 - Length of AC where pressures > ½ maximal IAS pressure

Rectoanal reflex activity

- Rapid distention of the rectum leads to transient increase in RP and EAS contraction (contractile reflex) and reduction of IAS relaxation (inhibitory reflex).

Rectal sensation

- The lowest volume of air that evokes sensation to evacuate
- Maximum tolerable volume

Rectal compliance

- Capacity and distensibility of the rectum.
- Higher compliance indicates = Lower resistance to distention and vice versa

Balloon expulsion test

- Assessment of rectoanal co-ordination during defaecatory manoeuvres and patient's ability to expel a filled balloon from the rectum
- Norm = expulsion within 1 minute
- Dyssynergia = unable to expel within 3 minutes
 - Type 1: Normal push with paradoxical ASP contraction
 - Type 2: Unable to generate push with paradoxical contraction
 - Type 3: Normal push with absent or incomplete (<20%) ASP relaxation
 - Type 4: Unable to generate push & absent/incomplete AS relaxation

Box 3

Conservative management of FI

- Revision of patient's polypharmacy, dietary and fluid intake
- Stool modifying agents
- Specialist pelvic floor physiotherapy exercises, biofeedback, defaecation dynamics, holding on programme
- Continence adjuncts & containment products (pads, anal plug)
- Retrograde rectal irrigation

Box 4

approach to the management of FI combined with acknowledgement that disorders of the pelvic floor are often multivariant and involve more than one compartment and seldom are isolated entities is the first step towards optimum management. With this in mind it is recommended⁵ that any pelvic floor group ought to take

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