



ANAL INCONTINENCE

Edited by Paola de Nardi (denardi.paola@hsr.it)

Surgical Department - Division of upper GI and colorectal surgery San Raffaele Scientific Institute - Milan, Italy

DEFINITION

Anal incontinence is the inability to control the evacuation of flatus or stool, or to hold on the rectal content for a sufficient time to reach an adequate setting for evacuation.

There are no certain data regarding the prevalence of the disease in the general population in Italy.

However, it is estimated that about 2% of the population is affected. This percentage significantly increases in the elderly and in patients staying in long-term care institutions.

Patients with anal incontinence present with a variety of symptom complexes ranging from sporadic gas to complete faecal leakage.

There are two main types of incontinence:

- urge incontinence: the patient, although feeling the urge to defecate and the passage of the stool, is unable to prevent the leak. This is often due to external anal sphincter dysfunction
- passive incontinence: passage of gas, liquid or solid stool unperceived by the patient, typically related to an internal anal sphincter defect or poor closure of the anus for rectal prolapse or IV degree haemorrhoids

CAUSES

The causes of faecal incontinence are multiple and often derive from a combination of factors. Congenital causes, such as imperforate anus, spina bifida, and myelomeningocele, are rare. Most common acquired causes are:

1. anal sphincter disruption due either to trauma or surgical procedures in the anorectal area, such as surgery for **tumours**, anal fistula or fissure, haemorrhoidectomy, **surgery for rectal prolapse** and mostly obstetric injury. In fact, it is well known that vaginal delivery represents the main predisposing factor in women, determining an 8-fold higher incidence in women compared to men.
2. An altered intestinal function as in inflammatory bowel disease or malabsorption.
3. Neurological diseases such as stroke, spinal cord injury, or diabetic neuropathy.

INITIAL CLINICAL ASSESSMENT

Initial evaluation can often be performed in primary care. The family doctor, after a full medical history and physical examination (including anal inspection, abdominal palpation, a brief neurological examination, and digital rectal examination), can start initial interventions which include: adjustment of diet, establishing a regular bowel habit, anti-diarrhoeal medication or rectal irrigation or can prescribe further diagnostic testing when organic conditions are suspected.

DIAGNOSTIC TESTING

A variety of anorectal investigations, including manometry, anal ultrasound, MRI, defaecography, and neuro-physiological testing can be helpful if initial interventions are ineffective

SPECIALISTIC TREATMENT

Patients with faecal incontinence that fails to respond to initial and secondary management requires specialised consultation by a gastroenterologist, colorectal surgeon, and/or a multi-disciplinary team.

The initial specialist treatment is always rehabilitative.



Rehabilitation mainly consists of three techniques: physiokinetic therapy (exercises to strengthen the pelvic floor and sphincter muscles), biofeedback (behavioural technique to restore the awareness of physiological functions), electric stimulation (application of electric stimuli to nerves or muscles aiming to determine functionally effective movements).

Surgical treatment is reserved to patients whose sphincter is neurologically intact and reparable (reconstructive surgery) or, alternatively, to cases in which a sphincter function replacement surgery may be applied.

The main anal function reconstructive and replacement procedures are:

1. **sphincteroplasty**: the two separate sphincter muscle edges are sewn together in an overlapping fashion
2. **stimulated graciloplasty**: the non-functioning sphincter is replaced by a motor muscle of the thigh (gracilis muscle)
3. **injection of bulking agents**: injection of biomaterial into the anal canal to increase the resistance
4. **artificial anal sphincter**: implantation of a device with a switch, that may be used by the patient to control the opening and closure of the anal canal at will
5. **sacral neuromodulation**: electric stimulation of a sacral root, usually S3, which regulates muscle contraction of the sphincter
6. **percutaneous tibial nerve stimulation (PTNS)**: minimal invasive system allowing a retrograde access to the sacral plexus, through percutaneous electric stimulation of the tibial nerve

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