

# Treatments of faecal incontinence: recommendations from the French National Society of Coloproctology

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Received 28 March 2013; accepted 9 June 2013

## Abstract

Faecal incontinence is common and significantly affects quality of life. Its treatment involves dietary manipulation, medical treatments, perineal rehabilitation or surgery. In this paper, the French National Society of Coloproctology offers recommendations based on the data in the current literature, including those on recently developed treatments. There is a lack of high quality data and most of the recommendations are therefore based either on grade of recommendation B or expert recommendation (Level 4). However, the literature supports the construction of an algorithm based on the available scientific evidence and expert recom-

mendation which may be useful in clinical practice. The French National Society of Coloproctology proposes a decision-making algorithm that includes recent developments of treatment. The current recommendations support sacral nerve modulation as the key treatment for faecal incontinence. They do not support the use of sphincter substitutions except in certain circumstances. Transanal irrigation is a novel often successful treatment of faecal incontinence due to neurological disorders.

**Keywords** Faecal incontinence, national recommendations, coloproctology

## Introduction

In recent years new treatments for faecal incontinence have been developed, including sacral nerve modulation, posterior tibial nerve stimulation (PTNS) and transanal irrigation. However, no recent recommendations incorporating these treatments have been published. The French National Society of Coloproctology took the initiative to establish recommendations for clinical practice in this area.

## Method

An organizing committee was appointed by the French National Society of Coloproctology. A list of questions was defined, and a working group and a reading group

were created to represent various professional subdisciplines. The working group analysed each selected item according to the literature, which allowed a level of scientific evidence to be assigned to each item. A systematic search was performed using the following databases: MEDLINE, HealthSTAR, EMBASE, PASCAL and the Cochrane Library. We first identified the recommendations for clinical practice, consensus conferences, articles on medical decisions, systematic reviews and meta-analyses on the subject over a period of 10 years to assess the relevance of keywords and their combinations. The literature obtained in the automated searches was supplemented by the results of manual searches performed by each member of the working group.

Based on this analysis, the working group proposed recommendations. Depending on the level of evidence in the studies on which they were based, the recommendations were given a grade ranging from A to C taking subdivisions of the Level of Evidence as pro-

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posed by the Haute Autorité de Santé (High Authority of Health) and shown in Table 1. In the absence of sufficient scientific data, recommendations were made based on consensus by the working group. The references cited in the paper have contributed to the development of graded recommendations that rely on all available references on the topic for analysis. The reading group was consulted for advice on the content and form of the recommendations, particularly on their readability and applicability using Delphi methodology. The comments from the reading group were taken into account whenever possible when finalizing the recommendations.

## Treatments

### Dietary manipulation

Patients with impaired faecal continence should be asked about their eating habits, any dietary triggers of their bowel movements and the consistency of their stool [Grade C, Scientific Evidence (SE) III] [1–3]. The regulation of transit and stool consistency are priorities in the management of faecal incontinence (Grade C, SE V).

The consumption or addition of dietary fibre or mucilage may be recommended for patients with soft or liquid stools (Grade B, SE II). A diet rich in fibre or the use of laxatives, rectal suppositories or enemas may be effective in controlling incontinent episodes associated with constipation (Grade A, SE I) [4–6].

Fibre does not provide any additional benefit for patients with hard or normal consistency stools (Grade C, SE V).

**Table 1** Levels of scientific evidence and grades of recommendation (Haute Autorité de Santé, High Authority of Health).

Type of scientific evidence	Grade of recommendation
I Large randomized controlled trials with undeniable results	A
II Small randomized controlled trials and uncertain outcomes	B
III Non-randomized trials with control groups contemporaries	C
IV Comparative non-randomized groups with historical controls and case-control studies	
V No control groups, patient series Case reports Expert recommendation	

There is no recommendation regarding the usefulness of dieting or the consumption of particular beverages or caffeine for obese incontinent patients (Grade C, SE V).

Intestinal disorders are common in patients with faecal incontinence.

### Pharmacological treatment

Drugs may be used to regulate intestinal transit or to act specifically on the closing pressure of the anal canal to treat faecal incontinence. Mucilage is defined as gelatinous substances derived from plants. There are many proprietary versions.

Antimotility drugs (loperamide and codeine) are effective and are recommended for patients with loose stool (Grade A, SE I) [7–9]. Their effectiveness in association with mucilage, however, has not been determined in incontinent patients without diarrhoea (Grade C, SE V).

Mucilage is often offered to patients with loose or watery stools. Although this practice is not supported by scientific studies, it can be recommended in clinical practice (Grade C, SE IV).

Cholestyramine may also be used and can improve continence by modifying stool consistency (Grade C, SE IV) [10].

Topical phenylephrine has not demonstrated efficacy in incontinent patients, and it is not recommended [11–13]. Topical agents with zinc or aluminium and oral medications such as valproate, diazepam and amitriptyline are not recommended (Grade C, SE V) [14–16].

For postmenopausal women, general or local hormone replacement therapy does not sufficiently improve continence and therefore cannot be recommended (Grade C, SE V) [17].

### Perineal rehabilitation

Perineal rehabilitation strategies are recommended (Grade B, SE II) for patients with persistent incontinence who require regulation of frequency and consistency of the stool. Anorectal manometry may be used to assess which treatments may be effective (Grade C, SE V). Rehabilitation should involve the retraining of the perineal sphincters and abdominal muscles (Grade C, SE V). Various rehabilitation techniques are available (e.g. pelvic floor exercises, biofeedback and electrostimulation).

The evidence from the literature on electrostimulation is such that this treatment alone cannot be recommended for incontinence (Grade C, SE IV).

Biofeedback is the most widely used form of rehabilitation and success rates ranging from 50 to 90% have been reported in non-randomized trials, but often without long-term follow-up. No factor predicting success has been clearly identified and some results remain contradictory (Grade B, SE II) [18–24]. Moreover, a randomized controlled trial demonstrated that neither pelvic floor exercise nor biofeedback was superior to standard conservative therapy [25].

According to the clinical practice of the expert group, and because of insufficient data in the literature, it is recommended that at least 10 sessions of biofeedback be conducted. In cases that show improvement after the first 10 sessions, the experts suggest that 10 additional sessions may be added (Grade C, SE V).

#### **Bulking agent injection and radiofrequency (Secca) treatment**

Several randomized controlled trials have tested the effectiveness of bulking agents and radiofrequency, but the results remain contradictory [26–29]. At present, the injection of bulking agents cannot be recommended (Grade C, SE V).

Radiofrequency energy delivery to the anal canal (Secca procedure) is not recommended because of insufficient data (Grade C, SE V) [30–34].

#### **Sphincter repair and artificial sphincter reconstruction**

Some patients with faecal incontinence have a sphincter defect that may be repaired surgically. A sphincter repair can be proposed for a defect of 60° to 120° and is especially recommended if the lesion is recent (Grade B, SE II) [35,36]. The type of technique used for sphincter repair (direct or overlapping sphincter repair) does not influence the success rate [37,38]. However, the procedure must be associated with regulation of intestinal transit (Grade C, SE IV). A colostomy or a period of parenteral nutrition associated with the procedure is not routinely recommended (Grade C, SE IV).

In the case of a minimal subclinical defect, e.g. one seen by endoanal ultrasonography, sacral nerve modulation may be preferred to sphincter repair. Pudendal neuropathy is often associated with a minimal defect and thus may be better treated by sacral nerve modulation (Grade B, SE II) [39,40].

Based on the current knowledge and devices available in France, it is not possible to make specific recommendations regarding artificial sphincter recon-

struction (dynamic graciloplasty, artificial bowel sphincter or magnetic anal sphincter) (Grade C, SE V) [41–48].

#### **Neuromodulation**

##### *Sacral nerve modulation*

Sacral nerve modulation is effective treatment for faecal incontinence, although its mode of action is unclear [49–53]. It can be recommended after the failure of conservative treatment (medical treatment and biofeedback) in patients having at least one episode of faecal incontinence per week. Despite many published studies, no long-term predictive factors of success have been clearly identified. However, Dudding *et al.* tried to identify predictive factors of the effect of temporary and permanent stimulation. In this cohort study, a low threshold to obtain a motor response during the temporary test was associated with an improved outcome. On the other hand, the need for a repeated temporary procedure and an anal sphincter lesion were associated with a risk of failure. However, no difference was reported in the medium-term follow-up between patients with external anal sphincter lesion and patients with intact sphincters [54].

There are various indications for sacral nerve modulation. It can be offered to patients with idiopathic anal incontinence, in patients with sphincter defect even when extensive (Grade B, SE III), in the case of scleroderma (Grade C, SE V) and in patients with central or incomplete peripheral non-progressive neurological lesions (Grade B, SE V) [39,55–62]. However, despite one positive study, sacral nerve modulation cannot be recommended for incontinence associated with Crohn's disease owing to the paucity of published data [63]. Any concomitant urinary incontinence with overactive bladder may also respond to sacral nerve modulation (Grade C, SE III) [64–66].

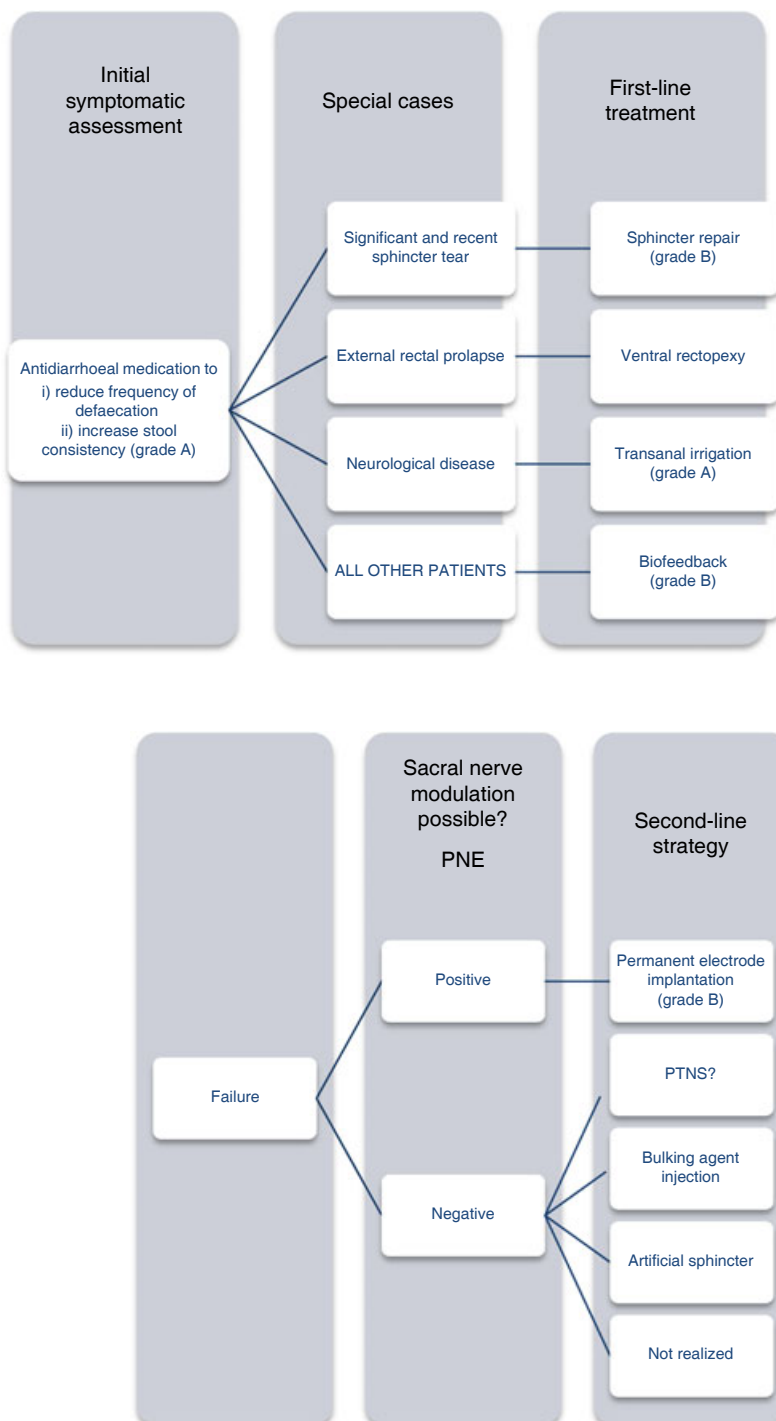
Overall, however, the data are currently too poor to form a cohesive recommendation for these guidelines (Grade C, SE IV).

The duration of acute testing [peripheral nerve evaluation (PNE)] of at least 3 weeks and the stimulation parameters of frequency (14–15 Hz), pulse duration (210 µs) and threshold voltage (at threshold of sensation) are standard and the recommendation is to comply with them (Grade C, SE IV). There is no formal argument to recommend one PNE technique over another. The S3 sacral root, however, seems to be the most frequently used as it seems to be the most effective, based on the experience of different teams (Grade C, SE IV) [54,55]. There is no formal evidence to favour local or general anaesthesia for acute testing, but



antibiotic prophylaxis is recommended (Grade C, SE IV). There is no scientific evidence to recommend a specific type of electrode. It is recommended that the function of the pacemaker is verified and the position of the electrode is confirmed by radiological screening in the operating room during the insertion of the permanent electrode (Grade C, SE IV).

After permanent electrode insertion, the stimulation parameters should be determined from a PNE that is sufficiently long (at least 3 weeks) (Grade C, SE IV). In almost all cases, they are the same as given above for PNE. The decision for permanent electrode implantation is based on various factors, including stool frequency recorded by the calendar, the frequency of



**Figure 1** Decision algorithm for faecal incontinence treatment.

episodes of faecal incontinence and urgency measured in minutes (Grade C, SE IV). In the event of the failure of the PNE, it is advisable to re-examine the position of the electrode under radiological control and review the stimulation parameters. Clinical evaluation must be performed during PNE, not just at the end, and corrective measures should be taken if clinical improvement is < 50% (Grade C, SE IV).

Permanent implantation is recommended for patients reporting a reduction of at least 50% in the frequency of incontinent episodes and the urgency time measured in minutes recorded in the stool calendar (Grade C, SE IV). The patient must be instructed to use the programmer and to adjust it when necessary (Grade C, SE V).

It is desirable that the patient enters a therapeutic education programme and is reviewed at least annually (Grade C, SE V). Monitoring should include clinical assessment of stool frequency and the compilation of faecal incontinence severity and quality of life scores. The functioning of the pacemaker should also be checked (Grade C, SE V).

#### *Posterior tibial nerve stimulation*

There are few data currently available on the effectiveness of PTNS for faecal incontinence. This non-invasive, low-cost and easy to use technique may, however, produce promising results [67–70]. It can be recommended to patients with faecal incontinence without a transit disorder or where the incontinence is refractory to non-invasive therapy (Grade C, SE III). The indications for PTNS are the same as those for sacral neuromodulation (Grade C, SE V).

#### **Transanal irrigation**

Transanal irrigation is recommended for patients with anal incontinence and constipation related to neurological disease (Grade A, SE I) [71–73]. It aims to achieve a colonic cleansing to reduce faecal incontinence episodes. This treatment can be proposed as a secondary option after the failure of conservative treatments (dietary changes and medical treatment) and after the consideration of transit and complaint severity. There is no requirement for systematic complementary investigation prior to the use of transanal irrigation (Grade C, SE V).

Antegrade irrigation with a Malone antegrade continence enema may be proposed in cases of transanal irrigation failure (Grade C, SE V).

Both techniques require significant collaboration from the patients and their families (Grade C, SE IV).

## **Conclusion**

The literature is disappointing in that there is a paucity of high-level data on the treatment of incontinence. Most of our recommendations are therefore either Level B or expert recommendation (C). Despite this, there is sufficient information available to allow us to propose the management algorithm illustrated in Fig. 1, which we hope will be helpful in clinical practice. This also summarizes the conclusions of the working group, which are based as far as possible on scientific evidence.

## **French National Society of Coloproctology**

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Reading group: All members of the French National Society of Coloproctology.

## **Funding**

None.

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