



Functional disorders in patients with chronic constipation. Review of the literature and personal experience

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Abstract:

Most patients with constipation do not require surgical treatment, unless the cause of their symptoms is organic, such as entero-sigmoidocele or rectal intussusception.

This review deals with subjects whose constipation is functional, such as slow-transit or anismus. Choosing the right treatment is likely to be difficult in such cases. Some of them are likely to be improved by surgical treatment, nevertheless an operation may worsen the symptoms of the patient in some cases. This is because there might be a relevant mental component, which requires a psychiatric treatment more than surgery. The author both reports his personal experience and reviews the literature, aimed at suggesting correct guidelines.

Keywords: Constipation, anismus, slow-transit, obstructed defecation, entero-sigmoidocele

Introduction:

Chronic constipation may present in five clinical pictures.

Slow-transit constipation, obstructed defecation (OD), irritable bowel syndrome, rectal hyposensation and Hirschsprung's disease.

Nearly half of constipated patients suffer from obstructed defecation, i.e. have to strain to evacuate, may need to use the fingers to extract the stool out of the rectum or stimulate the perineum aimed at eliciting a motor reflex to empty the ampulla.

According to our experience, symptoms and signs of patients with OD may be represented as an ICEBERG with two emerging rocks, i.e. rectocele and rectal internal mucosal prolapse, and with ten underwater "occult" rocks, which, if not adequately recognized (diagnosed and cured), may cause the shrinkage of the "surgical ship". As shown in Figure 1, five occult lesions are functional (left) and five are organic (right).

Table 1. The Iceberg Of Obstructed Defecation

evident	RECTOCELE	MUCOSAL PROLAPSE
occult		
functional		organic
ANXIETY DEPRESSION		RECTAL INTUSSUSCEPTION
ANISMUS		HYST-VAGINAL PROLAPSE
PUDENDAL NEUROPATHY		CYSTOCELE - PROSTATISM
RECTAL HYPOSENSATION		ENTERO-SIGMOIDOCELE
SLOW TRANSIT		SOLITARY RECTAL ULCER
IRRIT BOWEL		

Twenty years ago we carried out a prospective study on one hundred patients with OD and we could provide the numbers of those suffering from the above mentioned diseases (1). Since then, this ICEBERG DIAGRAM was very helpful to better evaluate symptoms and signs of patients with OD.

By following the diagram we could identify patients who needed an operation (less than those previously considered “surgical”). The following step was to avoid surgery in patients whose main problem was functional and not organic.

Anxiety-Depression

Among “functional” cases, the most frequent were those with either anxiety or depression, nearly two-thirds of the OD cases. By avoiding surgery in such delicate difficult patients, we were able to avoid a failure. It should be noted that we had both a psychologist and a psychiatrist at our disposal to help patients with mental distresses. Just to make an example, among those who had a STARR procedure for OD, the so called “psychiatric patients” were those with an almost sure and predictable failure (2). On the other hand, we rarely used such operation, because we are aware that it is not effective in curing constipation in patients with OD, as reported by Madbouly et al. STARR cured OD just in a minority of patients at a follow-up of four years (3).

Our policy when dealing with OD patients is to minimize the number of those who need a surgical treatment. In two decades we operated less than a hundred patients but we cured more cases than other authors, with no severe postoperative complications. Two-thirds of our patients were either cured or improved six years after surgery (4).

Instead, if we look at surgeons who operated the majority of their patients with OD (500 cases in nine years, all using the STARR), we found that nearly 20% of them had life-threatening complications (5).

Anismus

As shown in Table 1, after psychiatric disorders, the most frequent problem of patient with OD was anismus, or non relaxing puborectalis muscle. It occurs in 44% of those with OD and is easily diagnosed by inserting a finger into the anal canal and asking the patient to strain after inspiring air in the chest. The tip of the finger may feel either a relaxation or a failure of relaxation on straining. This may easily orientate the diagnosis of anismus. To be sure, we can suggest the patient to undergo either an endoanal ultrasound with a rotating probe or a defecography.

In the first 10 years during which we used the “iceberg diagram” in OD patients, in case of anismus, our first option to cure the patient was the biofeed-back, i.e. to involve an expert physiotherapist able to relax the muscle with pelvic floor exercises. Then, as part of our patients with anismus were women and suffered from anxiety, we “invented” a novel procedure, called psycho-echo-biofeed-back. A psychologist first relaxed the muscles of the female patients then started to release a so-called “guided imagery”, i.e. a combination of new age music and hypnotic words. After one hour and four attempts to defecate (i.e. strain looking at the puborectalis muscle on the ultrasound screen) the female patients, who had the ultrasound probe in her vagina, were able to slightly release (or “open”) the puborectalis muscle. Two-thirds of the patients had either cured or improved their anismus (6).

Another weapon at disposal of the proctologist to treat anismus is the injection of botulin toxin A in the muscle, maximum 100 units. The success rate is around 50%.

Finally, in the last twelve years we used to perform a bilateral partial miotomy of the puborectalis. We carry out this operation in those who do not respond to physiokinesitherapy.

We published our technique and the results of the miotomies, the success rate is around 70% at medium term. The operation has to be performed in patients with strong sphincters to avoid postoperative incontinence. A metanalysis from the Cleveland Clinic Florida on around 200 patients demonstrated that most of them remained continent after the miotomy (7). By following strict indications, we did not operate many patients, but we had no case of permanent anal incontinence. To avoid complications such as bleeding and sepsis we use a mini-invasive procedure (8). The patient is discharged after the first defecation, usually the 2nd day postoperatively.

Pudendal Neuropathy

Is a troublesome condition, affecting 15% of our OD patients, mainly women who keep stretching their perineum due both to multiple vaginal deliveries and to repeated attempts to defecate. The exact diagnosis can be made measuring the PNTML (pudendal nerve motor latency). But the instrument is not often available, therefore one can easily measure an associated perineal descent, if more than 2 cm on straining, and the contraction of the anal sphincter muscle elicited gently touching the perianal skin with a needle.

Rectal Hyposensation

It occurs in one-third (33%) of those with OD. The rectum “does not feel” the stool properly for a defect of sensation, they stay in the rectum longer than 24-36 hours, the water of the faeces is reabsorbed by the rectal wall, the stool become small and hard and do not elicit the peristaltic reflex. In other words the rectum is not able anymore to expel them. Result: OD. Not rarely the functional disorder is misdiagnosed and there are surgeons not expert in the rectal and pelvic floor physiology who think that the solution is to resect a segment of the rectum, usually carrying out a STARR procedure, strongly advertized by the industry. Of course the correct solution is much less dangerous and costly and consists in trying to increase rectal sensation. Either with rubber balloon in the hands of a physiotherapist or by electrostimulating the rectum with a small electrode which can be used at home.

But prior to that, suggesting the patient to drink a lot of water and to eat a high residue diet, i.e. bran, large leaves vegetables and pear-apples with skin.

SLOW INTESTINAL TRANSIT and IRRITABLE BOWEL SYNDROME are present in 28% of the OD patients. In the past, for slow transit constipation, several surgeons used to carry out a colectomy and ileorectal anastomosis, but the results were not encouraging. Some of the patients had diarrhoea and fecal incontinence, and adhesions with abdominal pain was not a rare event (9). Constipated patients with irritable bowel syndrome usually present with pain in the lower left abdomen, where a tense and painful muscle-like mass is often palpable. It is a case of sigmoid hypersegmentation. Most of these patients have a psychosomatic component.

This paper is dedicated to the patients with chronic constipation due to functional disorders. These are indicated in the left column in Table 1, whereas on the right are listed the organic diseases causing OD. Clearly, surgery is more often indicated in the organic diseases, but it should be noted that many of our “organic” cases did not need surgery and could be treated adequately with the help of other specialists, such as urologists and gynecologists. This is the case of prostatism and modest hysterocele. Instead, the diseases which more often required surgery are enterosigmoidocele, i.e. obliteration of the Douglas pouch, and recto-rectal intussusception, i.e. ventral rectopexy.

In conclusion, aimed at properly treating patients with obstructed defecation, the coloproctologist needs to have an equipe of different specialists, starting from a psychologist and a psychiatrist, a physiochinesitherapist, and, as above mentioned, an urogynecologist plus, not yet mentioned, a gastroenterologist. Surgery is rarely indicated, less than 20% of the patients. Those who have a negative outcome after an operation are those with psychological or, worse, psychiatric problems.

We do not have to forget the sentence of Professor Ira Kodner, the President of the American Society of Colon and Rectal Surgeons: “I would never operate on a patient with recto-rectal intussusception without a psychological consultation”.

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