

A WELL THOUGHT-OUT PROTOCOL IN NEUROGENIC BOWEL MANAGEMENT PERMITS BETTER OUTCOME IN NEUROGENIC BLADDER REHABILITATION

Hypothesis / aims of study

In January 2010, we introduced a simple morphofunctional evaluation method for individuals who were candidates to use transanal irrigation (TAI). The method consists of diluting an iodinated contrast medium (iopamiro) in the water of the container. After rectal examination to rule out diseases of the anal canal and the rectal ampulla, the tube is then inserted and the irrigation fluid with the contrast medium is subsequently introduced in increasing quantities, with a fluoroscopic examination being performed every 100 mL. Individuals also undergo a preliminary assessment by means of a bowel diary

Study design, materials and methods

We analysed data from 57 spinal cord injury patients enrolled from January 2010 to October 2011. Four individuals were rejected at the start of the study due to the presence of significant rectal prolapse and anal fistulae; the other 53 patients all followed the study protocol. Study participants were selected by doctors from the neurourology department during urology visits, on the basis of selection criteria of significant bowel evacuation difficulties despite a specific bowel programme. Before using TAI, all study participants had tried laxatives and mechanical or digital bowel stimulation in association with glycerin suppositories. 15 individuals reported episodes of faecal incontinence.

In urological terms, all study participants had not achieved a good balance during the bladder filling phase associated with detrusor hyperactivity treatments (pharmacological treatment with antimuscarinics or with sacral and pudendal nerve stimulation) and with the use of botulinum toxin in achieving continence. 49 patients (95%) reported colibacilluria with in 21 symptoms of loss of urine and recurrent use of antibiotic treatment. In all situations, bladder evacuation was guaranteed by means of intermittent catheterisation. The following parameters were evaluated during the first session: presence of faecoliths during the filling phase; dilation of the ampulla during the filling phase; rectal sensitivity or pain during the filling phase; presence of bowel peristalsis during the procedure. Once the filling phase was completed, study participants used the toilet and a fluoroscopic examination was subsequently performed in order to evaluate whether complete evacuation had taken place. All study participants underwent another evaluation two weeks after the first session, performing the same TAI procedure with contrast medium and fluoroscopic examination. After an initial phase, the irrigation fluid dose was established for each patient on the basis of the morphofunctional characteristics of the bowel observed during the evaluation

Results

Of the 53 individuals enrolled, only 4 abandoned the procedure during the follow-up phase: 3 due to dilation of the ampulla and sigmoid pouch during the filling process, without re-ascent of the irrigation fluid, and 1 with a cervical lesion due to the presence of autonomic dysreflexia triggered by the procedure. The follow-up was continued by means of outpatient evaluations involving the bowel and bladder diaries. All study participants underwent 2 evaluations with X-ray examination (baseline and after two weeks) and 3–5 clinical evaluations over a follow-up period that varied from 4–12 months. The average volume currently used by individuals for TAI is 580 mL. High quantities of fluid are not necessary for irrigation. After the initial evaluation, which found a high presence of chronic faecal impaction with faecoliths, we adopted the approach of using Macrogol and TAI every day for the first week, then continuing until the next check-up with irrigation three times a week and the administration of Macrogol the previous day. During the follow-up, all study participants have continued with TAI three times a week and 49 are continuing to take oral laxatives the previous day. The bowel diaries kept by the patients receiving treatment report the disappearance of episodes of incontinence.

With introduction of this protocol all patients with bladder incontinence achieved a better control of the bladder without modification of urological treatment. There have been no further symptomatic infections of germs of intestinal origin (*E. coli* and *Enterobacter*).

Interpretation of results

Numerous methods have been proposed to encourage normal stool consistency and promote complete evacuation. Abdominal massage, the use of the Valsalva manoeuvre, the combination of laxatives and drugs that reduce stool consistency, and prokinetic drugs are all suggested aids. The introduction of TAI has been found to be a possible effective alternative, although the level of evidence is not high yet. In our experience, the introduction of an easy method that promotes better-reasoned use of this approach leads to a higher percentage of positive results. A better bowel management is strictly related on better management of bladder disorders.

Concluding message

These data describe the first group of individuals who followed the protocol.

The current finding is that this approach makes it possible to offer a genuine, measured and effective response not only to neurogenic bowel dysfunction but permit a better control of bladder bacteriuria with increase in efficacy of bladder management.

Disclosures

Funding: Coloplast **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** observational study with an approved device **Helsinki:** Yes **Informed Consent:** Yes