

Efficacy of biofeedback therapy

Biofeedback is effective for the treatment of dyssynergic defecation and levator ani syndrome, according to the results of two recent, randomized, controlled trials.

In patients with dyssynergic defecation, defective muscle contraction and relaxation results in failure to complete the process of defecation. “This is a learned behavioral disorder that is learned over many years,” explains Satish Rao from the University of Iowa, USA. Biofeedback is already known to be effective for the short-term treatment of dyssynergic defecation but no trials had assessed its long-term effects. “Old habits die hard,” says Rao. “Patients may revert back to their old habits and the beneficial effects of biofeedback may be lost—we were keen to find out what happened in the long term.”

26 patients were randomly assigned to receive biofeedback therapy (manometric-assisted pelvic relaxation and simulated defecation training) or standard therapy (diet, exercise and laxatives) for 3 months followed by follow-up visits at 3-monthly intervals for 1 year. Patients who received biofeedback therapy demonstrated a significant increase in the number of complete spontaneous bowel movements at the 1 year follow-up compared with baseline and compared with patients who received standard therapy.

“This is the first randomized, controlled trial to show that biofeedback therapy is useful for the long-term management of dyssynergic defecation,” says Rao. “The next step is to develop improved methods of administering this treatment in the community—home biofeedback therapy, for example.”

In a second study, Guiseppe Chiarioni and colleagues performed a prospective, randomized, controlled trial comparing the effectiveness of biofeedback, electrogalvanic stimulation and digital massage of the levator muscles for the treatment of levator ani syndrome. This disorder (also known as proctalgia) is characterized by episodic rectal pain and its pathophysiology is unclear.

157 patients who were either highly likely to have levator ani syndrome (pain or tenderness on rectal examination) or who were diagnosed with possible levator ani syndrome (no pain on examination) were enrolled in the study. Patients were randomly allocated to one of the three treatment arms and received nine treatment sessions. Clinical and physiological outcomes were reassessed 1, 3, 6 and 12 months after the end of treatment.

“The vast majority (87%) of patients who were highly likely to have levator ani syndrome reported adequate pain relief at 1 month and throughout follow-up,” reports Chiarioni. “We have provided unequivocal evidence that biofeedback is an effective treatment for chronic levator ani syndrome and electrogalvanic stimulation is somewhat effective. Massage of the levator muscles was poorly effective and its use should be discouraged,” he concludes.

Interestingly, most patients who were highly likely to have levator ani syndrome also showed physiologic features of dyssynergic defecation. Chiarioni and colleagues suggest that these two disorders could represent different manifestations of the same underlying disorder.

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Original articles Rao, S. S. C. *et al.* Long-term efficacy of biofeedback therapy for dyssynergic defecation: randomized controlled trial. *Am. J. Gastroenterol.* **105**, 890–896 (2010) | Chiarioni, G. *et al.* Biofeedback is superior to electrogalvanic stimulation and massage for treatment of levator ani syndrome. *Gastroenterology* **138**, 1321–1329 (2010)