Evidence base for managing neurogenic bowel dysfunction

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Conditions affecting the central nervous system frequently cause neurogenic bowel dysfunction, leading to impairment of sensory and/or motor control of the bowel. Incontinence and constipation in neurogenic bowel are intrinsically associated since treatment of one may result in the other.

Management of neurogenic bowel involves the modulation of stool consistency, promotion of stool transit through the bowel and effective evacuation of stool from the rectum at an appropriate time and place, so that the routine of regular emptying reduces the risk of impaction, and the regular time aims to avoid incontinence.

Conservative approaches, such as dietary and bowel care interventions and oral laxatives, can be included in an individualised programme that is repeated regularly with sufficient frequency to prevent constipation and faecal incontinence. Alternatives to consider when these methods fail include biofeedback, sacral nerve stimulation and formation of a colostomy.

Despite the range of interventions, research evidence to support neurogenic bowel management remains scant.

A Cochrane review (Coggrave et al, 2014) aimed to determine the effects of management strategies for faecal incontinence and constipation in people with a neurological disease or injury affecting the central nervous system.

**Cochrane review**
The review included participants aged over 18 years with symptoms of faecal incontinence or constipation and considered any type of conservative or surgical management, as well as combined interventions.

**Results**
A total of 902 participants in 20 randomised controlled studies (RCTs) were included. Conditions included spinal cord injuries, Parkinson’s disease, multiple sclerosis (MS) and stroke; two RCTs included various conditions (cerebral palsy, MS, brain injury and spinal cord injury).

Overall, participant characteristics and outcome measures were too dissimilar for pooling in quantitative synthesis. The poor methodological quality of most studies and the small number of trials did not allow reliable conclusions to be drawn. However, some interventions produce some positive outcomes, including:
- Bulk-forming laxatives or isosmotic macrogol solution improved the number of bowel motions or successful bowel care routines;
- Transanal irrigation improved constipation score, neurologic bowel dysfunction score, faecal incontinence score and total time for bowel care in individuals with chronic spinal cord injury. There was also higher general satisfaction compared with conservative management;
- Tap water enemas showed advantages over laxatives in successful evacuations;
- Polyethylene glycol-based bisacodyl suppositories, neostigmine-glycopyrrolate and electrical stimulation reduced total bowel care time compared with placebo or no treatment;
- Oral carbonated water improved constipation scores;
- Abdominal massage improved constipation scores;
- Timing evacuation routine contributed to the efficacy of bowel management.

**Conclusion**
Bowel management is a significant issue for patients with neurogenic faecal incontinence and constipation, but few studies address it. The limited available evidence is of low methodological quality and the clinical significance of most findings are difficult to interpret.

There was limited evidence in favour of bulk-forming laxatives and isosmotic macrogol laxative, abdominal massage, electrical stimulation and the combination of neostigmine and glycopyrrolate compared with controls or no treatment.

There was also some evidence in favour of transanal irrigation compared with conservative management, and abdominal massage with lifestyle advice compared with lifestyle advice alone. One study found that patients may benefit from even one educational contact with a nurse.

**Implications for practice**
Nurses involved in the management of patients with neurogenic bowel dysfunction must take into account the benefit of single or grouped interventions in particular conditions and individual patients. More importantly, the benefit of interventions must consider their acceptability to individual patients.

There is a need for more rigorous randomised trials using clinically relevant outcome measures and a need for more research about the experiences of people with neurogenic bowel dysfunction to ensure the development of a comprehensive approach to bowel management.

**References**

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- Exploring the benefits of anal irrigation
- Bit.ly/NTTransAnalIrrigation