

FAST FACTS AND CONCEPTS #317
PALLIATION OF NEUROGENIC BOWEL**Kathleen McCabe DO; Earl L Smith MD, PhD**

Background: Neurogenic bowel is the loss of normal bowel function that results from damage to the gastrointestinal innervation (1). It occurs in many diagnoses within the scope of hospice and palliative care clinicians. This *Fast Fact* will focus on how to identify and manage neurogenic bowel in the palliative care and hospice patient population.

Pathophysiology:

- **Upper motor neuron (UMN) lesions:** occur above the conus medullaris and are associated with hyperreflexic bowel or an increase in tone of the intestinal wall and anal sphincter (2). Because peristalsis remains intact, the combination of propelling stool against a tight sphincter often presents as constipation with fecal retention and impaction. Evacuation depends on initiating the rectal-colon reflex by stimulating the bowel wall digitally or with a suppository.
- **Lower motor neuron (LMN) lesions:** are at or below the level of the conus medullaris and are associated with an areflexic bowel, characterized by a flaccid anal sphincter, and slow peristalsis (2). LMN lesions present as constipation with bowel incontinence. The major therapeutic distinction is to utilize stool bulking agents like fiber to prevent bowel accidents in LMN lesions.

Impact of Neurogenic Bowel: Neurogenic bowel rates as a significant cause of anxiety and distress, especially for those who require greater than 15 minutes to complete bowel routines (3,4). In the critically ill, neurogenic bowel can even be life threatening and associated with viscous perforation, delirium, or difficulty weaning from a ventilator (5-7). Patients with non-traumatic spinal cord injury (SCI) have shorter life expectancies whereas traumatic SCI patients, if getting excellent care and are not ventilator dependent, have near normal life expectancies (8).

Clinical Evaluation: While the presence of neurogenic bowel is usually evident in traumatic SCI, clinicians may overlook it in non-traumatic etiologies such as multiple sclerosis, stroke, or cancer (see *FFs # 237 & 238*). In patients with an insult to the spinal cord, a digital rectal exam should be performed to distinguish between UMN and LMN lesions. UMN lesions will result in a tight sphincter, while LMN lesions will result in a flaccid anal sphincter with no volitional contraction.

Management of Neurogenic Bowel: Despite data showing that patients with well-managed neurogenic bowel have a better quality of life, there is a paucity of controlled trials examining the best treatments (1,4,6). As a result, the following empiric recommendations arise from a consortium of SCI experts (9):

- **Non-pharmacological measures:** *Routine is critical.* At the same time every day, ideally about 30 minutes after a meal in order to utilize the gastro-colic reflex, the patient should sit on a commode while a clinician applies pressures to the abdomen in a clockwise manner for 5 minutes at a time. For terminally ill patients who cannot tolerate regular meals nor a commode, do the same with the patient on his or her side in the bed. Follow this with digital stimulation to the rectal wall in a circular motion for 20-30 seconds and if necessary, manual disimpaction.
- **Pharmacological measures:** Administer a 10 mg bisacodyl suppository at the same time daily. Make sure the suppository contacts the bowel wall, not just the stool itself. Once the patient is having regular bowel movements at least every other day, transition to a glycerin suppository or a mini-enema (a commercially available 5 mL enema of docusate, polyethylene glycol and glycerin). To time bowel movements for the morning, give 2-4 tabs of senna at bedtime.
- **Next steps:** if these measures are ineffective after 2-3 days, imaging with a KUB may be needed to evaluate for ileus or bowel obstruction. Otherwise consider lactulose 30 mL, magnesium citrate 300 mL or sorbitol 70% solution up to 150 mL PO, or an enema.

Special Considerations

- SCI patients are susceptible to autonomic dysreflexia (AD), an abnormal sympathetic nervous system response to a noxious stimulus below the level of the spinal cord lesion. Typical AD symptoms are

diaphoresis and a rapid rise in blood pressure that can be life threatening. The definitive treatment is to remove the noxious stimulus (e.g. malfunctioning Foley, TED stockings or impacted stool).

- Patients already on opioids will likely require higher doses as well as more frequent use of cathartics. See *Fast Facts* #294 and 295.
- Transanal irrigation, a self-administered irrigation consisting of a soft inflatable balloon to hold a rectal catheter in place, has been shown to be effective for refractory cases in small studies (4).
- Though more invasive, colostomy placement and electrical stimulation to the bowel have been described in select patients with longer prognoses and refractory symptoms.

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