

Transanal irrigation to treat chronic constipation in patients with spinal cord injury: a case study

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ABSTRACT

This case study explores the benefits of transanal irrigation as a treatment for a patient with a spinal cord injury who was experiencing chronic constipation. In this case, the patient was having episodes of autonomic dysreflexia as a result of the constipation. This condition is unique to patients with spinal cord injury and presents a stroke risk. The article outlines the contraindications and cautions that need to be considered in assessing a patient's suitability for transanal irrigation, and the elements that form part of a holistic assessment by a specialist nurse.

Key words: Constipation ■ Bowel disfunction ■ Spinal cord injury ■ Continence ■ Non-surgical treatment

Transanal irrigation is a conservative bowel management treatment for constipation that allows washout of the lower bowel, descending colon (up to the splenic flexure), and is used as an alternative to surgery (Yates, 2019). Instillation of warm or tepid tap water at 36–38°C (Henderson et al, 2018) produces rectal distension and is thought to stimulate peristalsis, which can greatly improve the symptoms and reduce the severity of chronic constipation. It is self-administered by the patient at home, or by carers, family members or community nursing teams after adequate training in the use of equipment designed for this purpose. It is minimally invasive, safe and effective in the management of chronic constipation.

Definitions of chronic constipation vary. To some, the term 'chronic constipation' means infrequent bowel movements for prolonged periods of time, often weeks, whereas to others it means experiencing straining or difficulty in evacuating the stool for at least 3 months (Emmett et al, 2015).

Transanal irrigation was approved by the National Institute for Health and Care Excellence (2022) as a form of bowel treatment in individuals who suffer bowel dysfunction of either constipation or faecal incontinence, or both. By regularly emptying the bowel

in this way, transanal irrigation is intended to help to re-establish controlled bowel function and enable the patient to choose the time and place of evacuation and frequency of using this equipment (Emmanuel et al, 2013). A review by Emmett et al (2015) concluded the success rate of transanal irrigation is around 50%. This can be considered adequate given the chronic, often stubborn nature of the symptoms and the simple, reversible nature of this treatment (Faaborg et al, 2009). Etherson et al (2017) found that around 60% of patients with chronic constipation used transanal irrigation for an extended period of time (1–2 years or more) compared with all other non-surgical treatments, and felt their symptoms were significantly improved.

Bowel perforation is a serious adverse event that is potentially linked to transanal irrigation, and in a global audit by Christensen et al (2016), the reported rate of occurrence was around 1 in 2 million. Other, less serious adverse events are more common: abdominal pain, rectal bleeding, nausea and headaches. Despite these low risks, this must still be discussed with clients at the time of consultation.

Contraindications to transanal irrigation

- Active inflammatory bowel disease
- Acute diverticulitis
- Ulcerative colitis
- Anal/colorectal stenosis
- Change in bowel habits (until cancer has been excluded)
- Colorectal cancer
- Within 3 months of rectal/colorectal surgery
- Within 4 weeks of polypectomy
- Pregnancy.

Caution required in transanal irrigation

- Use of rectal medications
- Radiotherapy to abdomen/pelvic region
- Previous anal/colorectal/pelvic surgery
- Severe autonomic dysreflexia
- Cognitive impairment
- Faecal impaction
- During conception
- Rectal bleeding
- Severe rectal/abdominal pain
- Painful anal conditions – fissure/fistula/haemorrhoid.

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Table 1. Types of transanal irrigation systems

Manufacturer	Type
Qufora	<ul style="list-style-type: none"> ■ Mini Go – soft pump and cones ■ Mini Go Flex – soft pump and cones ■ Irrisedo Flow – water bag and cones ■ Irrisedo Klick system – control unit with pump, water bag and rectal catheters ■ Irrisedo Bed system – water bag and rectal catheters
Renew Medical	<ul style="list-style-type: none"> ■ Aquaflush Compact – pump and cones ■ Aquaflush Compact+ – pump, extension tubing and cones ■ Aquaflush Lite – water bag and cones
Coloplast	<ul style="list-style-type: none"> ■ Peristeen Plus (regular/small) – control unit, water bag, tubing and rectal catheters ■ Peristeen Plus accessory unit (regular/small) – water bag and rectal catheters ■ Peristeen Plus system with cone catheter – water bag and cones, with or without toilet bag
Wellspect	<ul style="list-style-type: none"> ■ Navina Smart System – control unit (touch sensitive), water container, tubing and rectal catheters ■ Navina Classic System – classic control hand-held unit, water container, tubing and rectal catheters ■ Navina consumable set – water container and rectal catheters

Case study

Mr K was a gentleman with a new spinal cord injury who sustained his injury following a motorbike accident – the injury occurred at level T6. He began experiencing autonomic dysreflexia episodes and it became evident this was due to a distended bowel because of constipation. I was asked to review and provide a holistic assessment of suitability for transanal irrigation. Mr K was also using clean intermittent self-catheterisation to maintain a healthy bladder and complete bladder drainage.

Autonomic dysreflexia is the name given to a condition where there is a sudden and potentially lethal rise in blood pressure in someone with a spinal cord injury, triggered by a harmful stimulus within the body. It is unique to spinal cord injury and most commonly affects people with injuries at or above T6. This extreme rise in blood pressure (hypertension) can lead to some types of stroke (cerebral haemorrhage) and even death. Autonomic dysreflexia is caused by the body’s ‘fight or flight’ response. A person’s blood pressure rises when their body encounters a harmful stimulus. This is detected by the nervous system, which then responds, via the autonomic nervous system, by dilating blood vessels, and therefore lowering blood pressure to try to keep it within the normal range. When someone has a spinal cord injury at the level of T6 or above, the autonomic nervous system cannot lower raised blood pressure in response to a stimulus that would cause pain or discomfort – such as a distended bladder or bowel – below the level of spinal cord injury. The person’s blood pressure continues to rise until the offending stimulus is removed (Spinal Injuries Association, 2022; Royal National Orthopaedic Hospital NHS Trust, 2023). There are some helpful information videos available online:

- London Spinal Cord Injury Centre (<https://www.rnoh.nhs.uk/services/spinal-cord-injury-centre>)

■ NHS Improvement, via the Spinal Injuries Association (<https://spinal.co.uk/news/risks-of-autonomic-dysreflexia>).
 When I first met Mr K, he was 6 months post injury. He had been managing his bowels with oral laxatives and by performing manual evacuations approximately three times a week. He was finding he was not getting the results he required and was left feeling bloated and uncomfortable. He also did not like having to use manual evacuations in order to remove the stool from inside his rectum. I contacted Mr K and arranged to see him at home – his wife was also present.

I performed a full holistic assessment, which included an in-depth bowel assessment considering bowel symptoms, onset, duration, and previous treatments and effects on his quality of life. I also obtained a full medical and surgical history and discussed current medications, both prescribed and over-the-counter treatments that had been purchased. I then performed a risk assessment to ensure that none of the contraindications or cautions for use of transanal irrigation were flagged. I explained to Mr K the potential risk in undertaking transanal irrigation, and the signs and symptoms of bowel perforation.

Mr K had no issue in understanding what would be expected, and had good dexterity, and could manage to reach and use the toilet independently. His wife was also happy to support if needed. Following further discussion and providing written and verbal information and considering perceived patient expectations, I suggested that he commence on a cone gravity system (see *Table 1* for different systems available). In the constipated patient, it is often easier to use a cone gravity system as the water finds its own way and if leakage occurs, the cone can easily be removed. It is often a stop/start process. With a rectal catheter system, if leakage occurs the rectal balloon catheter would be deflated, and then would need priming and changing as it is not ideal for the balloon to be reinflated. If leakage is occurring, then the system is not being as effective in stimulating the bowel.

I ensured that an explanation of risks and benefits was provided and fully understood. Mr K was happy with this and was advised that he would need to start with 500ml warm water, and that he would need to remain seated on the toilet for 10–15 minutes following irrigation. I also highlighted that in some cases, it can take up to 3 months for effective transanal irrigation regimen to be established. Supervision was offered and accepted for his first irrigation, and the consent form signed by the patient to acknowledge that he was happy to proceed with this treatment.

Following irrigation, there was no stool passed, only ‘murky brown water’. I therefore suggested that he continue daily transanal irrigation, instilling 500ml tepid/warm tap water, for the next 2 weeks, and continue with his oral laxatives. Mr K had not opened his bowels for 3 days before commencing the transanal irrigation. Contact details were given to Mr K and a telephone review scheduled for 2 weeks, and a further home visit in 6 weeks, although he was aware he could contact me at any point before this date should he experience any issues or concerns.

On telephone contact with Mr K after 2 weeks, he said that for the 4 days leading up to my call, he had started to pass small amounts of formed stool, and denied any issues with pain, discomfort or bleeding. It was therefore jointly agreed that I

would make telephone contact again in a further 2 weeks to review progress. At this time, Mr K reported he was passing larger amounts of stool, just like he used to do before his accident, and was very happy with the results of using the transanal irrigation system. It was therefore suggested that Mr K could trial alternate-day transanal irrigation to see how this worked, and if it was unsuccessful, he could go back to daily irrigation. At the time of the further home visit at 6 weeks, Mr K's regimen was well established, he was using the system daily and achieving a good bowel movement each time. He reported that he was left feeling comfortable, and had not experienced any pain, discomfort or abdominal bloating, but more importantly had not had any autonomic dysreflexia episodes.

Conclusion

Transanal irrigation provided a welcome relief from the debilitating symptoms of constipation. It promoted patient motivation and autonomy, along with a willingness to continue. It promoted Mr K's confidence in establishing his own bowel regimen and was a successful management plan, giving him back daily control of his life and daily activities. Mr K was also allocated a nominated customer service individual from the Fittleworth Navigator team, who have undergone in-depth training and gained extra knowledge around the needs of people with spinal cord injuries, and what it is like to live every day with a spinal cord injury – this enables them to provide a bespoke, personal one-to-one service. **BJN**

Declaration of interest: none

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KEY POINTS

- Transanal irrigation is a conservative bowel management treatment for constipation, used as an alternative to surgery
- Autonomic dysreflexia is a condition that occurs in people with spinal cord injuries – a sudden and potentially lethal rise in blood pressure, triggered by a painful stimulus within the body
- One stimulus that can trigger autonomic dysreflexia is a distended bowel as a result of chronic constipation
- In this case, transanal irrigation was explored as a treatment option when the patient was not happy with the results of other methods of managing constipation

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CPD reflective questions

- Can you explain what autonomic dysreflexia is and how this occurs?
- Are you able to identify the early warning signs of autonomic dysreflexia?
- Reflect on your experiences of caring for patients with spinal cord injuries. Would you feel prepared to teach transanal irrigation to spinal cord injury patients with injury at T6 or above?

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