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CASE REPORT

Rectum perforation during transanal irrigation: a case story

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Study design: Case report.
Objective: Report a case of rectum perforation during transanal irrigation (TAI).
Setting: Clinic for Spinal Cord Injuries, and Departments of Gastroenterological Surgery and Radiology.
Case report: A 54-year-old woman with spinal cord lesion for 35 years emptied for years her bowel using oral laxative. This became more difficult and took more than 2 h three times a week with reflex stimulation after a chlysma. She wanted to try TAI, and went through the procedure with a nurse one time. The next time she performed the TAI by herself without difficulty. Two hours later she started shivering with a temperature at 38.3 °C with normal blood pressure (BP). At rectal exploration, a spoonful fresh blood was found. After another 2 h, she became septic and was transferred to a gastroenterological surgical department. An abdominal X-ray gave no suspicion of free air in the abdomen. Sigmoideoscopy showed 3–5 cm oral to the dentate line a 1×1 cm transmural circular lesion. A colon X-ray with water contrast showed a perforation of approximately 2×0.5 cm.
Conclusion: Even in experienced individuals who are proper trained, TAI can cause rectal perforation, which always have to be born in mind.
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Keywords: transanal irrigation; bowel management; rectum perforation

Individuals with spinal cord lesion (SCL) have a higher risk of both faecal incontinence and constipation than the general population. A Cochrane review concludes 'Bowel management for these people must remain empirical until well-designed controlled trials with adequate numbers and clinically relevant outcome measures become available'.[1]

A randomized controlled trial of transanal irrigation (TAI) versus conservative bowel management in individuals with SCL found TAI that improved constipation, faecal incontinence and symptom-related quality of life.[2] Therefore, TAI is naturally appearing as a more regular treatment option for individuals with SCL with problems in the evacuation of the bowel. The method is generally safe but may in unfortunate cases cause rectal perforation.

Case report

This woman contracted at the age of 19 years a complete T3 SCL. At initial discharge, she emptied her urinary bladder by suprapubic tapping and was continent, and could voluntarily empty her bowel, and used oral laxative. Years later she learned to empty her urinary bladder by intermittent self-catheterization. Her bowel management was mostly scheduled to every second day. Over the later years, the bowel evacuation became more difficult and took more than 2 h three times a week. She managed the procedure all by herself with reflex stimulation with the finger after the initial use of chlysma. There was no faecal incontinence, and no bowel discomfort or pain, but haemorrhoids. At the age of 54 years, she wanted, because of the lengthy procedure, to try TAI with the Peristeen Anal Irrigation system (Coloplast A/S, Kokkedal, Denmark) (Figure 1). She had oral and written information about the procedure, and was later instructed regarding the use of the system and underwent the whole procedure with the help of a nurse another time. The next time she performed the TAI using 700 ml by herself without difficulty, although she found blood on the irrigation catheter, which initially was thought to be due to her haemorrhids. She had no other symptoms or signs. After 2 h, she started shivering with a temperature at 38.3 °C (ear temperature) and blood pressure (BP) at 95/50 mm Hg, which was normal for her. The abdomen was soft with no palpable pathological tumours and with normal intestinal sound. Anal inspection showed haemorrhoids grade IV prolabating from the anus, with no visible blood from these, but at rectal exploration a spoonful fresh blood was found. She was

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Figure 1 The type of Peristeen Anal Irrigation System (Coloplast A/S) used by the patient in the present case report.

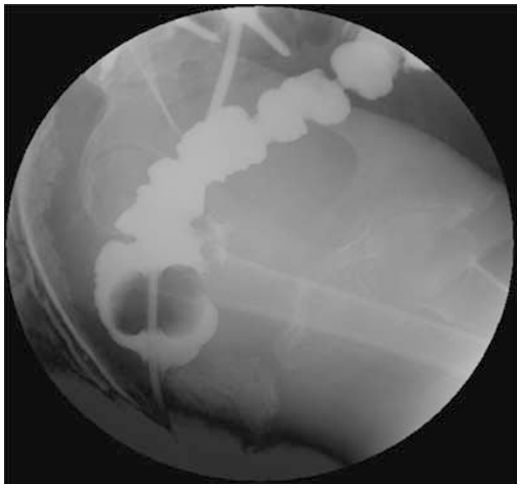

Figure 2 Colon X-ray with water contrast showing a perforation just inside the rectum at the left side.

started on oral ciprofloxacin 500 mg twice daily, and continued under observation. After approximately 2 h, the temperature rose to 38.7 °C (ears), BP fell to 65/45 mm Hg and the pulse rate increased from 99 to 125 min^{-1}. The patient was transferred to a gastroenterological surgical department under the suspicion of rectal perforation and septicaemia. At rectal exploration, the haemorrhoids and active bleeding from above was confirmed. Her haemoglobolin and electrolytes were normal, leukocytes elevated to 14.4×10^9 per litre and the C-reactive protein (CRP) was 271 nmol l^{-1}. Treatment with intravenous gentamicin 240 mg once daily, ampicillin 2 g thrice daily and metronidazole 0.5 g thrice daily was started. An acute abdominal X-ray showed no evidence of free air in the abdomen. A sigmoideoscopy showed that the bleeding had stopped, and 3–5 cm oral to the dentate line an approximately 1×1 cm transmural circular hours old lesion without bleeding was found. The following morning she recorded temperature of 38.4 °C, but otherwise unaffected but a little tired. The leukocytes had decreased to 8.1×10^9 per litre and the CRP had increased to 1419 nmol l^{-1}. A colon X-ray with water contrast was carried out and showed a perforation of approximately 2×0.5 cm lateral to the left just inside the rectum (Figure 2), no further propagation of the lesion was found. The following days the leukocytes had decreased to 3.2×10^9 per litre and the CRP to 381 nmol l^{-1}. On the third day she could manage herself, and she was discharged on the sixth day on oral antibiotics.

After this incidence, she was not interested in using TAI any more and came back to her usual way of bowel emptying. But interestingly, the procedures had made the change that she now was able to empty her bowel in less than an hour, and yet there was no incontinence.

Discussion

We agree with the practise point made by Goetz[3] that TAI should be considered for individuals with SCL who have not experienced adequate improvement in bowel function with conservative bowel care techniques. Still it is important to be aware that even in experienced individuals who are properly trained, TAI can cause rectal perforation, which always has to be borne in mind.

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