Using abdominal massage in bowel management


Abstract

This article describes the introduction of abdominal massage techniques by a community team as part of a total bowel management programme for people with learning disabilities. A trust-wide audit of prescribed laxative use by this client group raised concerns, and led to a more systematic approach to managing constipation in people with learning disabilities. An education programme for carers proved to be successful. Some reported that adopting abdominal massage provided further opportunity to develop the therapeutic relationship.

Keywords

Abdominal massage, autism, bowel management, constipation, laxatives, learning disabilities

Review

COMMON FEATURES OF constipation include persistent infrequent bowel movements that are of a hard consistency, prolonged in transit, incomplete and difficult to pass (Castledine et al 2007, Joanna Briggs Institute 2008, Collins and Burch 2009).

Constipation is subjectively diagnosed based on the individual’s perception of a change in his or her normal bowel pattern (Böhmer et al 2001). The World Gastroenterology Organisation (WGO) (2010) describes constipation as a symptom, not a disease. The Rome III diagnostic criteria for functional constipation (WGO 2010), a set of symptom-based criteria summarised by experts in the field of gastroenterology (Box 1), are often used to assess and diagnose constipation in children and adults (Harrington and Haskvitz 2006, Longstreth et al 2006, Lämås et al 2009).

It is generally accepted that 10-20% of adults in the UK experience constipation (Crouch 2003, Peate 2003). Approximately 3% of children in the general population may experience chronic constipation, accounting for one quarter of the caseloads of gastroenterology clinics (Galal et al 2007). Nurses play a major role in managing patients with constipation (Lämås et al 2009). It is known to make heavy demands on NHS resources; more than £60 million was spent on prescribed laxatives in primary care in England alone in 2009 (Kyle 2011). Caring for people with constipation in the community has been estimated to comprise 10% of district nursing time (Crouch 2003).

Constipation in people with learning disabilities

People with learning disabilities have been identified as having increased risk factors for developing constipation (Emly and Rochester 2006,
Charlot et al (2011). Constipation is a common and potentially serious problem that is frequently diagnosed, but often under-treated, in people with learning disabilities (Moss et al 2008). In general, the incidence of constipation rises with age, however it has been suggested that constipation presents early in people with learning disabilities because of factors such as communication difficulties, for example the inability to express the need to defecate, and reduced physical activity, often causing behavioural and physical difficulties (Böhmer et al 2001). People with learning disabilities are more likely to be overweight than the general population as a result of poor diet and lack of exercise, both of which tend to increase the risk of constipation (Hallawell et al 2012). The detection and treatment of constipation should therefore be considered an issue of high importance by carers and nurses (Charlot et al 2011).

Since there is a high incidence of communication difficulties among people with learning disabilities, and the nature of these difficulties can be diverse, diagnosis of constipation is often delayed (Marsh and Sweeney 2008). These individuals may be at a pre-verbal stage of communication or have problems with expression, making it difficult for them to convey pain and discomfort as a result of constipation (Bosch et al 2002). Pain and discomfort may be expressed through withdrawn or challenging behaviours, leading to misdiagnosis and sometimes the inappropriate prescription of antipsychotic or antidepressant medications, which can cause constipation (Charlot et al 2011). Diagnostic overshadowing may occur, whereby a physical illness is not investigated because symptoms are attributed to the person's mental health status or learning disability (Barriball et al 2008). Where people have limited communication, it may be necessary to look for other signs that may suggest constipation, such as vomiting, eating problems, weight loss as a result of eating problems or a reduced appetite because of abdominal discomfort, abdominal pain, abdominal distension, emotional distress, flatulence, overflow diarrhoea and soiling caused by impaction (Prasher and Smith 2002).

**Abdominal massage**

Abdominal massage has been recognised as a treatment for constipation for several hundred years (Smith 2013). Details of how to perform abdominal massage can be found in Emly et al (2001) and Smith (2013). While its popularity has fluctuated, there is currently renewed interest in abdominal massage, especially in the field of learning disabilities (Smith 2013). Abdominal massage is believed to increase peristalsis in the gut and reduce colonic transit time (Harrington and Haskvitz 2006). The massaging action may make stools easier to pass by softening their consistency, and reduce colonic transit time (Harrington and Haskvitz 2006). The massaging action may make stools easier to pass by softening their consistency, and reduce colonic transit time (Harrington and Haskvitz 2006). The massaging action may make stools easier to pass by softening their consistency, and reduce colonic transit time.

In a randomised controlled trial with a sample of 60 people experiencing constipation, 30 participants were given their usual laxatives and abdominal massage and the remainder were given their usual laxatives only, over a study period of eight weeks (Lämås et al 2009). Although abdominal massage did not result in a decrease in the use of laxatives, the severity of constipation and abdominal discomfort decreased. The number of bowel movements also increased in the abdominal massage and laxatives treatment group (Lämås et al 2009). Lämås et al (2009) suggested that this supports the use of abdominal massage in conjunction with laxatives but not as an alternative.

Some of the advantages associated with abdominal massage include a lack of known side effects and limited number of contraindications (Emly et al 2001, Harrington and Haskvitz 2006, Lämås et al 2009). Abdominal massage is also a non-invasive technique, which makes it preferable to more invasive treatments such as suppositories and enemas (Preece 2002, Moss et al 2008). More invasive treatments are particularly distressing for people with learning disabilities who may not understand fully their necessity.

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**BOX 1**

**Rome III diagnostic criteria for functional constipation**

**General diagnostic criteria:**
- Present for at least three months during a period of six months.
- Insufficient criteria for inflammatory bowel syndrome.
- No stools, or rarely loose stools.
- Specific criteria apply to at least one out of every four defecations.

**Specific diagnostic criteria. Must include two or more of the following:**
- Straining.
- Lumpy or hard stools.
- Sensation of incomplete evacuation.
- Sensation of anorectal blockage or obstruction.
- Manual or digital manoeuvres applied to assist defecation.
- Fewer than three defecations per week

(Adapted from World Gastroenterology Organisation 2010)
In addition, abdominal massage has been shown to be effective in resolving constipation in some patients where diet and laxatives have failed (Emly et al 2001, Harrington and Haskvitz 2006). There is also the factor of cost to be considered, because pharmaceutical treatments have major cost implications for the NHS.

Abdominal massage is not suitable for use in clients with (Lindley 2014):

- A history of malignant bowel obstruction or abdominal growth.
- A history of inflammatory disease of the intestine.
- Spastic colon as a result of irritable bowel syndrome.
- Unstable spinal injury.
- Recent abdominal scarring.
- Skin lesions.

Extra care should be taken where the person has an abdominal hernia, whether hiatus, umbilical or inguinal.

### Total bowel management programme

In 2006, Northamptonshire Teaching Primary Care Trust carried out an audit of bowel care for people with learning disabilities living in 16 care homes in the north of the county, because of concerns about the apparent ineffectiveness and high cost of many of the pharmacological treatments being prescribed at the time. The audit included 181 residents, of which 65 (36%) were taking laxatives every day. For comparison, a study of older people living in the community found that 29% were taking laxatives (Cusack et al 2012). Table 1 shows the number of laxatives taken by people with learning disabilities in the audit.

Table 2 lists the types of laxatives taken.

In light of these findings, the community teams for people with learning disability (CTPLD) used their journal club to review the literature for alternative strategies in bowel management. The Leeds physiotherapy team was contacted to provide training on abdominal massage and some members of the CTPLD received training (Emly and Rochester 2006). This training was then cascaded to other team members. A cross-county group was set up to ensure a consistent approach to abdominal massage, with GP and paediatric consultant involvement. The group developed a training and information pack, in accordance with the recommendations of the Chartered Society of Physiotherapy and Royal College of Nursing. A training DVD was developed for carers.

### TABLE 1

Laxatives taken by people with learning disabilities in care homes

<table>
<thead>
<tr>
<th>Number of laxatives taken</th>
<th>Number of individuals</th>
<th>Enemas and/or suppositories included in laxative count</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>32</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>&gt;3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

### TABLE 2

Types of laxatives taken by people with learning disabilities in care homes

<table>
<thead>
<tr>
<th>Laxative</th>
<th>Type</th>
<th>Number using laxatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lactulose</td>
<td>Osmotic</td>
<td>46</td>
</tr>
<tr>
<td>Senna</td>
<td>Stimulant</td>
<td>27</td>
</tr>
<tr>
<td>Fybogel</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>Bisocodyl suppositories</td>
<td>Stimulant</td>
<td>8</td>
</tr>
<tr>
<td>Movicol</td>
<td>Osmotic</td>
<td>4</td>
</tr>
<tr>
<td>Husk</td>
<td>Bulk-forming</td>
<td>2</td>
</tr>
<tr>
<td>Glycerine suppositories</td>
<td>Stimulant</td>
<td>2</td>
</tr>
<tr>
<td>Bisocodyl (oral)</td>
<td>Stimulant</td>
<td>1</td>
</tr>
<tr>
<td>Microlax enema</td>
<td>Stimulant</td>
<td>1</td>
</tr>
<tr>
<td>Enema (not specified)</td>
<td>Stimulant</td>
<td>1</td>
</tr>
</tbody>
</table>
When a person with a learning disability is started on the total bowel management programme, a systematic regimen is established. A baseline assessment is completed for a two-week period to include completion of a Bristol Stool Chart (Lewis and Heaton 1997) and attention to diet, fluid intake, mobility, and toilet regimen and positioning. The GP is informed of the planned intervention and completes a risk assessment, and if agreement is reached on abdominal massage being implemented, a care plan is drawn up. If required, training is provided for carers by CTPLD staff. CTPLD staff carry out the initial abdominal massages and evaluate their effectiveness before carrying out the staff and/or carer training. The staff and/or carers are then observed performing abdominal massage and their competence assessed and agreed by the trainer. The performance of staff and carers is reviewed after six months, and they can contact the team for updates or reviews as required. The programme started in 2011 and the feedback so far has been positive. Examples of cases where abdominal massage was introduced successfully are provided in Box 2.

Feedback on abdominal massage
In January 2012, a questionnaire was sent opportunistically to families and carers to identify positive and negative aspects of abdominal massage and to gain some informal feedback on the experiences of people with learning disabilities and their carers. Important issues highlighted and comments provided by carers included:

Ease of learning and implementation:
- ‘Straight-forward to learn.’
- ‘Quite easy, took two to three sessions to remember sequence.’
- ‘Very, very easy to implement.’
- ‘OK when established, became part of the routine.’

Bowel movement changes:
- ‘Used to be nothing for days, after massage started to go every day after school and often in the morning.’
- ‘Helped him to pass it [stools].’
- ‘It was once a week, it is now every two to three days.’
- ‘Goes more frequently.’
- ‘More stools and not just a smear.’

Pain, mood, behaviour:
- ‘A lot better, she used to be violent towards me just before opening bowels – now she is OK.’
- ‘No longer lashes out because of his bowels.’
- ‘Improved behaviour and mood.’
- ‘More eye contact, loving, interaction.’
- ‘Individual is very relaxed. Really enjoys the massage.’
- ‘Child finds it easier to talk about anxieties, worries, general stuff when having a massage.’

Medication changes:
- ‘He went from 12 sachets of paediatric Movicol to one sachet a day.’
- ‘Had two senna tablets twice a day and these are no longer required.’
- ‘Cut down on medication.’
- ‘Lactulose stopped altogether.’
- ‘Huge decrease in Movicol, used infrequently now.’
- ‘Was not on any medication, as I tried loads and none seemed to work, now goes more often, softer, better consistency.’

All of the feedback on the introduction of abdominal massage was positive and no negative responses were received.

Discussion
Significant benefits were reported for individuals who received abdominal massage as part of the total bowel management programme. Abdominal massage helped to relieve discomfort and pain caused by chronic constipation and it improved quality of life for individuals. Because of the immediate visible results, parents and carers were motivated to implement abdominal massage. It was not necessary to be a qualified professional to be accepted for training, therefore it was more accessible to a wide range of individuals. Training helped people adopt a holistic approach to total bowel management, including changes to diet, an increase in fluids and the development of toilet routines. Since abdominal massage stimulates the bowel, and with some individuals it had an immediate effect, this helped to develop a toilet routine, promote continence and improve self-esteem. It empowered people by helping them to improve and manage bowel function. It also worked particularly well for people with autism because it had a clear structured approach.

Abdominal massage helped to develop therapeutic relationships between the carer and the client. It provides an opportunity for quality time between the carer and individual that was different to the usual task-orientated care schedule. It involved time being set aside specifically for the individual and helped develop therapeutic interaction with individuals with profound learning disabilities. The carers and people with learning disabilities liked the fact that abdominal massage reduced soiling. It encouraged people to relax and was viewed as enjoyable. Children responded to songs and actions that were incorporated in the massage schedule.
Health improvements included a reduction or discontinuation of laxatives.

The training and information pack was reviewed in 2013 and assessment of clinical competence was reviewed to ensure that it was consistent across all teams. All theoretical information is arranged in a set format to promote consistency with training across all teams. The DVD is useful in helping to reinforce the techniques taught in the training sessions. Managers were very supportive. They valued the measurable outcomes of abdominal massage and felt it improved patient’s quality of life and was cost-effective.

Although outcomes were positive, there were some difficulties. It was important to emphasise that if the massage is not done regularly it would not be effective. At times, referrals were inappropriate since some individuals did not have chronic constipation and did not meet the Rome III diagnostic criteria for functional constipation (WGO 2010). This was addressed by requesting that two weeks of Bristol Stool Charts were completed before offering the training.

The training process itself can be time-consuming, placing additional demands on resources. In some supported living and residential homes, the team could be asked to train up to 20 carers, but with a high staff turnover, there were continuous requests to train new staff. To manage resources more effectively, core staff who regularly look after the person with a learning disability who experiences constipation receive training. Other healthcare professionals from the CTPLD have been encouraged to become trainers. In addition, more people in the community team received training, therefore helping to share the workload. Working with families was more successful than working with professional carers, since they tended to be more consistent in their approach and required fewer resources – usually only one or two family members required training. There were issues with record keeping, for example some

**BOX 2**

**Case studies illustrating the successful use of abdominal massage**

**Client A: Aaron**
Aaron is a five-year-old boy with a severe learning disability, autism and chronic constipation. Constipation led to an increase in challenging behaviours. He was prescribed lactulose and senna daily.

Aaron’s mother was trained in abdominal massage and she performed it daily. Within two months, Aaron was opening his bowels every one to two days and all laxatives had been discontinued. Within four months, Aaron’s mother was performing abdominal massage only if Aaron had not opened his bowels for two days.

**Client B: Emma**
Emma is a 19-year-old woman with a severe learning disability, epilepsy and constipation. She was prescribed lactulose daily.

Abdominal massage was performed weekly by a community nurse. This session was always followed by a large bowel movement and regular defecation for two to three days afterwards. After two months, Emma’s mother was trained in abdominal massage and she performed massage every other day.

Two months later, lactulose administration was discontinued. Massage is performed every two-three days by Emma’s mother and Emma now has a regular bowel pattern.

**Client C: Rory**
Rory is an eight-year-old boy with autism, a moderate learning disability and chronic constipation. He was referred to the community team for people with a learning disability by the autism family advisory team. His pants were often smeared with faeces because of overflow constipation. He was prescribed three to four sachets of Movicol per day and lactulose 10mL per day.

Abdominal massage was performed weekly by a community nurse, and Rory often passed wind during the massage. He had large bowel movements on the day following the massage and then had regular bowel movements for the following two to three days before becoming constipated again.

Rory’s mother was trained in abdominal massage and she performed massage every other day. Rory now has regular bowel movements. No episodes of smearing have occurred since the commencement of abdominal massage. Movicol has been discontinued, but lactulose remains to soften stools because of a restricted diet.

**Client D: Amy**
Amy is a ten-year-old girl with Down’s syndrome, a mild to moderate learning disability and chronic constipation. She was referred to the community team for people with a learning disability by a paediatrician because of sleep problems. Amy was not sleeping alone because of vomiting episodes. A decision was made to get to know Amy’s parents by implementing abdominal massage for her constipation before tackling the sleep problems. She was prescribed Movicol daily.

Two hours after the first session of abdominal massage, Amy had a large bowel movement, followed by another large bowel movement two hours after that. A further large bowel movement followed the next morning. This pattern continued for another 24 hours, but the bowel movements then stopped for the following five days. Amy’s mother was trained in abdominal massage, and she managed to establish a regular bowel pattern without the use of laxatives.
people did not complete the Bristol Stool Charts to provide a baseline measurement and assess effectiveness. It was advised that this information was essential to measure outcomes as well as the effectiveness of abdominal massage.

**Conclusion**

The audit of bowel care for people with learning disabilities highlighted that a significant number of people were prescribed one or more laxatives over a long period of time. This group of vulnerable people, therefore, fit the criteria for the implementation of abdominal massage as part of a total bowel management approach.

Clinical experience with abdominal massage for constipation in one NHS foundation trust in England has shown it to be effective in reducing the effects of this distressing problem. One unexpected finding was that some carers reported that the physical closeness required during abdominal massage assisted interpersonal contact with clients who often have profound learning disabilities.

The bowel management group will continue to meet to examine current research and evidence, and keep practice up to date. The training and information packs will be reviewed and adapted as necessary. In the long term, it is hoped the total bowel management approach will have a positive effect on the quality of life for people with learning disabilities who are experiencing constipation and will lead to a reduction in overall laxative use.

### References


