

Percutaneous endoscopic colostomy

Interventional procedures guidance
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Your responsibility

This guidance represents the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take this guidance fully into account, and specifically any special arrangements relating to the introduction of new interventional procedures. The guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

All problems (adverse events) related to a medicine or medical device used for treatment or in a procedure should be reported to the Medicines and Healthcare products Regulatory Agency using the [Yellow Card Scheme](#).

Commissioners and/or providers have a responsibility to implement the guidance, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this guidance should be interpreted in a way that would be inconsistent with compliance with

those duties. Providers should ensure that governance structures are in place to review, authorise and monitor the introduction of new devices and procedures.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

1 Guidance

- 1.1 Current evidence on the safety and efficacy of percutaneous endoscopic colostomy (PEC) appears adequate to support the use of this procedure in elderly and frail patients with recurrent sigmoid volvulus and colonic motility problems provided that the normal arrangements are in place for audit and clinical governance.
- 1.2 Evidence on the use of PEC in children is limited. The care of children with chronic refractory constipation is complex and further evidence on the efficacy of the procedure and its place in the management of children would be useful. Patient selection in children is particularly important and should involve a multidisciplinary team that includes a paediatric gastroenterologist and colorectal surgeon. This procedure should be performed in specialist paediatric units.
- 1.3 Patients and/or their parents should be fully informed about the potential risk of peritonitis. They should be provided with clear written information. In addition, use of NICE's information for the public is recommended.

2 The procedure

2.1 Indications

- 2.1.1 Percutaneous endoscopic colostomy (PEC) is indicated primarily for recurrent sigmoid volvulus (twisting of the section of the bowel above the rectum) and colonic pseudo-obstruction. It may also be indicated in the treatment of children with constipation that is refractory to all medical treatments.

- 2.1.2 Sigmoid volvulus is more common in people older than 60 years, and in those with Hirschsprung's disease. It is also particularly common in people with chronic constipation. Sigmoid volvulus can be life threatening and must be promptly diagnosed and treated. Emergency treatment usually involves untwisting the bowel using a flatus tube or colonoscope. Subsequently, surgery may be considered to prevent recurrence, especially in patients who have suffered repeated episodes of sigmoid volvulus.
- 2.1.3 Existing surgical techniques include sigmoidopexy, sigmoidoplasty, sigmoid colectomy and primary anastomosis. These treatment options have varying success rates and open resection may be contraindicated for elderly and frail patients or severely immunocompromised patients.
- 2.1.4 PEC offers an alternative treatment for patients who have tried conventional treatment options without success or those who are unfit for surgery.

2.2 Outline of the procedure

- 2.2.1 PEC has evolved from percutaneous endoscopic gastrostomy (PEG).
- 2.2.2 PEC is a minimally invasive procedure. PEC tubing is placed in position using a colonoscope, which is inserted into the left colon through the rectum. A wire is passed through a small skin incision and pulled back through the anal canal via the colonoscope. The PEC tube is tied to the wire, pulled back through the bowel and abdominal wall, and secured against the abdominal wall. The colonoscope is re-inserted to check the final position of the PEC tube. The tube is then attached to a drainage bag, which is usually flushed twice a day. Prophylactic antibiotics are administered for a few days.

2.3 Efficacy

- 2.3.1 The published evidence on this procedure is limited. The largest published case series includes 15 children with refractory constipation, of whom 14 underwent the procedure and 6 were followed up for 12 months. All children evaluated at 12

months were socially clean (mostly clean with occasional accidents, or no soiling) and two children were able to have the tube removed.

- 2.3.2 In another case series of 14 elderly patients with recurrent sigmoid volvulus, 5 patients whose tubes had been left in situ remained recurrence free at a mean follow-up of 12.6 months. For more details, refer to the [overview](#).
- 2.3.3 The Specialist Advisors stated that outcomes seemed to be better in patients with sigmoid volvulus than in those with incontinence or constipation.

2.4 Safety

- 2.4.1 The most common complications reported were granuloma formation (6 out of 15, and 4 out of 6, in two case series) and infection (3 out of 15, and 2 out of 6). Other reported complications included pain associated with the administration of an enema (1 out of 15), colonic leakage (5 out of 6) and tube erosion (1 out of 6). Preliminary unpublished data from a multicentre UK audit reported a 12% infection rate (13 out of 105 patients) following the procedure. Two deaths attributed to late tube dislodgement were reported in patients treated for recurrent sigmoid volvulus. For more details, refer to the Sources of evidence section.
- 2.4.2 The Specialist Advisors listed the potential complications as infection, perforation leading to peritonitis, and bleeding.

2.5 Other comments

- 2.5.1 It was noted that there was an additional death resulting from peritonitis following a PEC procedure.

3 Further information

Sources of evidence

The evidence considered by the Interventional Procedures Advisory Committee is described in the [overview](#).

Information for the public

NICE has produced [information for the public on this procedure](#). It explains the nature of the procedure and the decision made, and has been written with patient consent in mind.

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Endorsing organisation

This guidance has been endorsed by [Healthcare Improvement Scotland](#).