

# Percutaneous Endoscopic Colostomy

(Information for the Specialist)



Percutaneous Endoscopic Colostomy (PEC) is a NICE recognized modification of Percutaneous Endoscopic Gastrostomy (PEG) using the same kit and technique. We use Corflo PEG systems which are 16Fr. Corflo have now developed a PEC kit with a 12Fr tube and a large inner flange.

## Indications

PEC may be used

- a) As an endoscopic method of elective fixation of the colon in Recurrent Sigmoid Volvulus (RSV) particularly in those unfit for general anaesthesia. (1).
- b) As a means of intermittent or continuous decompression of the colon in some cases of megacolon/ pseudo obstruction with symptomatic colonic distension
- b) As a means of antegrade distal colonic and rectal irrigation in some cases of evacuatory disorder, constipation and/or incontinence intractable to all other treatments in whom a permanent stoma is being considered as a last resort. (2).

## Contra Indications

- 1) colonic ischaemia
- 2) mechanical intestinal obstruction

## Technique

PEC must only be carried out those trained in this procedure. A16Fr PEG kit may be used but a specifically designed Corflo12Fr PEC kit with a large internal flange has been developed by VIASYS MedSystems (Wheeling IL) for clinical investigation (Ref 090120156). The colonoscope is passed as far as the splenic flexure and the patient turned on their back to aid transillumination in the darkened room and should only continue if good transillumination is achieved. The procedure is then performed in a similar fashion to PEG tube insertion.. Previously we used to place 2 PEC tubes to fix a volvulus. Evidence over the last few years shows that this is no longer necessary. The colonoscope used to be reinserted to inspect the flange but this is no longer done. The colon is allowed to decompress through the PEC tube which is left on open drainage. The PEC tube should be firmly strapped to the abdominal wall to avoid inadvertent displacement

particularly in patients with impaired mental function.. Two more doses of antibiotics may be given at 8 and 16 hours post operatively. This method should not be used to place PEC tubes proximal to the splenic flexure as pulling the wire around tight flexures may damage the colonic wall.

## Venting

Following the initial PEC tube insertion, the PEC tube needs to be vented daily to prevent colonic distension which may predispose to a colonic leak around the PEC tube. This is performed by injecting 10-20 mls of air or water to flush any stool off the proximal tube that may be blocking the tube. Then the bladder syringe is applied to the PEC tube with the barrel removed to allow the gas to vent freely (see video 1).

#### Further management – change to low profile PEC tube

The PEC tube is changed to a low profile device with balloon fixation six weeks after the procedure. The low profile device is routinely changed every six months to avoid balloon disintegration.

#### Long-term daily management of the low profile PEC tube

This depends on the initial reason for insertion

- 1) Sigmoid volvulus – These PEC tubes do not require any venting or irrigation. If however there is an element of pseudo-obstruction then daily venting is advisable (see video 2).
- 2) Pseudo-obstruction – Venting is required daily (see video 2).
- 2) Constipation - Anterograde irrigation may start once the low profile PEC device has been inserted (ie. 6 weeks following the initial PEC tube insertion) using a giving set of the type used for PEG feeding is all is well clinically. A small volume of 30-50 ml of saline should be instilled to assess free flow without pain. With the patient sitting on the toilet or commode about 500ml of tap water is instilled over 5-10 minutes or more slowly if the patient feels discomfort. Higher volumes may be used if necessary to empty the distal colon and rectum. Some patients find that a preliminary phosphate enema via the PEC tube before irrigation gives a better result. Evacuation is usually complete in 20-30 minutes. Most patients irrigate on alternate days. Dietary manipulation may be necessary

to adjust stool consistency.

Patients should be able to reduce or stop laxatives in the absence of significant right-sided constipation. A light gauze dressing is placed around the tube after the procedure. After 24 hours this may be discarded if there is no further discharge. The area should be cleaned daily with soap and water.

#### Complications

- 1) Superficial sepsis around the tube is common and requires no treatment except regular cleaning.
- 2) Subcutaneous sepsis with pain, fever and spreading erythema is treated by oral or IV antibiotics.
- 3) Faecal leakage around the tube occasionally occurs and usually settles in a few days.
- 4) Pain around the tube may be caused by sepsis or excessive tension.
- 5) Tube dislodgement in the early postoperative period leads to peritonitis and requires laparotomy. It is vital to strap the tube in such a way as to avoid dislodgement particularly in patients with impaired mental function. Many patients with RSV or severe neurological disease undergoing PEC are high operative risks.
- 6) The inner flange may become buried in the colonic wall leading to difficult irrigation. If the flange cannot be freed under endoscopic guidance, it should be replaced.
- 7) Late dislodgement of the PEC is treated by early reintubation. The patient should be advised to contact the Endoscopist or GP (who could insert a Foley Urinary Catheter) immediately. Patients should be given a hospital contact number.

#### Accidental PEC removal

Should the PEC tube be accidentally pulled out, a 12 or 16F catheter must be inserted as soon as possible and the balloon inflated with water as the track closes off within 24 hours. Once the catheter is inserted, please notify me and I will make arrangements to fit a new low profile PEC tube.

#### References

- 1) Daniels IR, Lamperelli MJ, Chave H, Simson JNL. Recurrent Sigmoid Volvulus treated by percutaneous endoscopic colostomy. Br J Surg 2000;87:1419.
- 1) Heriot AG, Tilney HS, Simson JNL. Percutaneous Endoscopic Colostomy for Obstructed Defaecation Dis Colon Rectum 2002;45:700-702

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