PREOPERATIVE ASSESSMENT AND PREPARATION

Key points

40% of PEG patients had a co-existing diagnosis of acute chest infection.

59% of PEG patients had suffered a stroke or neurological trauma before the insertion of their PEG.

42% of patients had no antibiotic prophylaxis for their PEG insertion.

Pre-existing medical condition

The co-existing conditions leading to the decision for the PEG procedure are presented in Table 31.

Table 31. Indications for PEG procedure (answers may be multiple)

Indication	Total *n = 706*
Nutritional failure due to non-malignant disease	284
Motor neurone/other degenerative disease	52
Neurological disease – acute (stroke, trauma)	418
Neurological disease – chronic (degenerative neurological disease)	94
Dementia	128
Malignancy – oropharyngeal cancer	27
Malignancy – oesophageal cancer	11
Malignancy – gastric cancer	2
Malignancy – other	40
Total	**1,056**
Not answered	13

NCEPOD did not ask specifically for the primary indication of the procedure. However, the commonest indication for PEG insertion was for feeding problems following an acute neurological disease, mostly a stroke. For a general discussion on patient selection for GI endoscopy see the earlier chapter discussing patient assessment.

Aspiration pneumonia

At the time of PEG insertion, 40% (281/710) of cases, where information was provided, had a co-existing diagnosis of acute chest infection. Many of these had swallowing difficulties, due to comorbidities such as motor neurone disease or following a stroke, and had aspiration pneumonia.

There appeared to be a misconception that PEG feeding would prevent aspiration pneumonia as clinicians had indicated on some questionnaires that this was the reason for PEG insertion when in fact aspiration pneumonia is the most common cause of death in these patients. PEG feeding does not prevent aspiration and it offers no protection from aspiration of colonised oral secretions as scintigraphic studies have shown evidence of aspiration of gastric contents in gastrostomy fed patients[5 6].

Dementia

18% (128/706) of patients had a diagnosis of dementia and in many of these the PEG was inserted because patients were feeding poorly. All relevant studies have shown that PEG feeding for those with dementia does not improve outcome[6 7 8 9] and an increasing number of clinicians are of the opinion that dementia is not an indication for PEG feeding[6 8 10]. NCEPOD advisors in their discussions were clear that for those patients with severe dementia and significant comorbidity such as those confined to bed with pressure sores and limb contractures, PEG feeding was unlikely to improve their quality of life and may not be a preferred option. They found the ethical decision on withholding feeding more difficult for those patients with dementia and poor nutrition but no other comorbidity.
The ethical considerations of artificial nutrition and hydration are discussed in the General Medical Council's (GMC) booklet on withholding and withdrawing life-prolonging treatments. In summary, the GMC advises using up-to-date professional advice on the particular clinical consideration and assessing quality of life issues. In addition, it advises wide consultation by seeking other expert opinion and involving the health care team and those close to the patient in decision making[11]. Little evidence was found in the casenotes regarding this type of discussion which either reflects poor record keeping or lack of consultation.

Acute neurological disorder

418/706 (59%) of patients were admitted following a stroke or acute neurological trauma. Patients with a stroke or neurological trauma are most commonly admitted to hospital as an emergency and have PEG feeding established later if required. There is evidence that PEG feeding, compared with nasogastric feeding after a stroke may result in improved nutritional status[12 13]. The time between admission and PEG procedure for those with an acute neurological disorder was examined. 92% (384/418) of patients had their procedure within 60 days of admission and the duration between admission and procedure is shown in Figure 12.

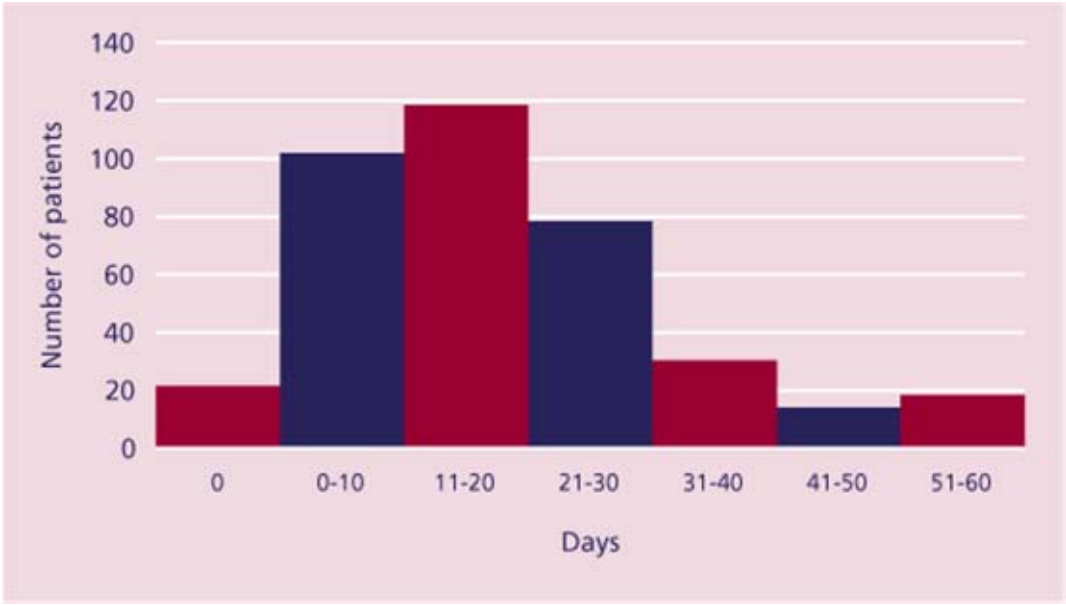

Figure 12. Days between admission and PEG procedure for those with acute neurological disorder

There are few data on the best timing for PEG feeding after a stroke. Historically, it was often deferred for four to six weeks to assess any improvement in dysphagia. However, there is some evidence from a 30 patient study that it should be considered earlier, at 14 days[13] and further trials are ongoing.

An advisor commented about a patient in their late sixties, *"Died two days after PEG insertion from 'inhalation pneumonia', but was admitted nine days before with rigors and a chest infection. It would appear that the PEG was placed too soon after an acute admission with pneumonia".*

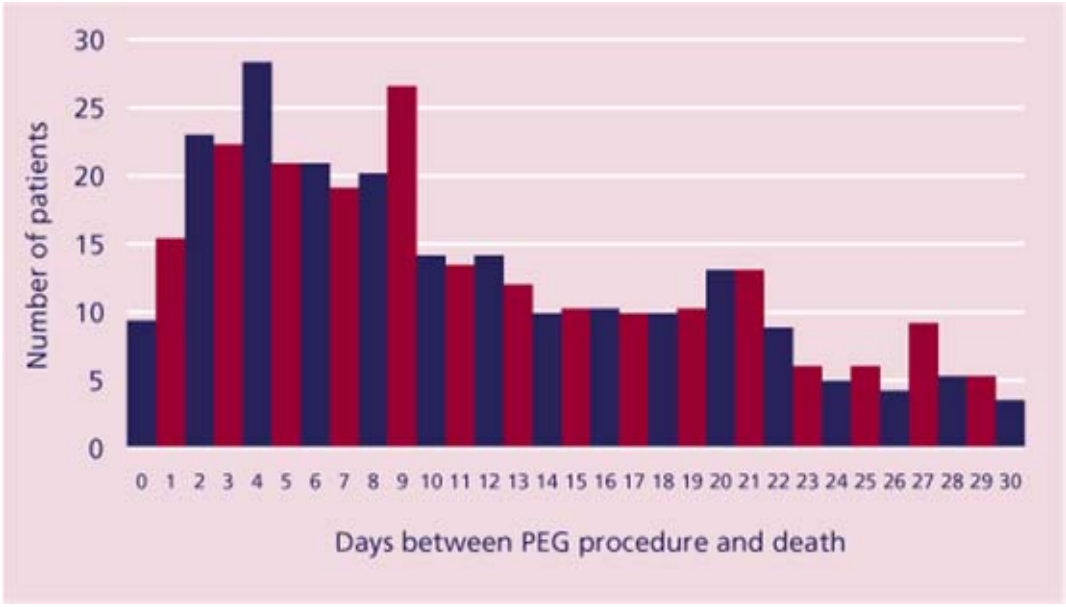

Figure 13. Days between PEG procedure and death for those with acute neurological disorder

Despite PEG feeding for acute neurological disorder being an elective procedure, nine patients died on the day of operation (Figure 13) and 38% (159/418) died on or before postoperative day 7. Why were there so many early deaths? Patient selection must be implicated, but in their discussions advisors were concerned that PEGs may sometimes be inserted to facilitate discharge to community nursing care and, medical considerations that should affect timing may be overlooked, in order to achieve this.

Antibiotic prophylaxis

The British Society of Gastroenterologists (BSG) in their guidelines on antibiotic prophylaxis for GI endoscopy recommends antibiotic prophylaxis for all PEG insertions[14]. There is evidence that antibiotics can reduce peristomal wound infection[15 16], particularly in those with underlying malignancy[17].

Table 32. Antibiotic prophylaxis administered for PEG procedure

	Total	*(%)*
Yes	305	*(58)*
No	220	*(42)*
Sub-total	**525**	
Not answered	194	
Total	**719**	

The data shown in Table 32 do not take account of patients who may have been receiving antibiotics for other reasons. Nevertheless, it would appear that antibiotic prophylaxis is not used universally and this requires urgent review.