The Pros and Cons of Percutaneous Endoscopic Gastrostomy

Sue Cullen
Consultant Gastroenterologist
Buckinghamshire Hospitals NHS Trust
PEG tube insertion

- Requires formal endoscopy with local anaesthetic spray and sedation (usually midazolam +/- pethidine)
- Requires direct access to stomach via the abdominal wall (mini operation)
- Practical difficulties
  - Patient unsafe for sedation
  - Patient unable to lie flat
  - Abdominal obesity
  - Anatomical variation eg large hiatus hernia
Complications of PEG insertion

- Peritonitis
- Leakage around gastrostomy site
- Haemorrhage from gastrostomy site
- Exit site infection (e.g., MRSA)
- Oesophageal lacerations
- Local pain at PEG site
- Buried bumper syndrome
- Aspiration pneumonia

Overall rate 5-30% (major 1-3%)
Exit site infection

- Exit site MRSA infection at WGH 2002 = 12%
- Screening and 5 day decontamination programme introduced
- Teicoplanin at time of procedure
- Reaudit – rates decreased to 2%
Buried bumper Syndrome
Indications for PEG placement in adults
Annual BANS report 2009

- CVA and chronic neurological disorders
  - Most common indication accounting for 48% of patients
  - 25-40% of CVA patients develop dysphagia

- Head and neck tumours
  - Increasing indication (25% in 2000 and 36% in 2008)

- Benign gastrointestinal disease including post operative
  - 8% of cases

- Trauma

- Persistent vegetative state
Are we choosing the right patients for PEG insertion?

- NCEPOD Report 2004: “Scoping our Practice”
  - 19% of PEG procedures were thought to be futile
  - 40% of patients had a co-existing diagnosis of chest infection
  - 18% had dementia
  - 43% died within 7 days
Survival of patients undergoing PEG insertion divided by diagnosis

Mortality after PEG insertion

- Overall mortality
  - at 30 days = 28%
  - At 1 year = 63%

- Dementia group
  - At 30 days = 54%
  - At 1 year = 90%
PEG placement in dementia

- BANS survey found 107 new patients with dementia and 582 established cases being fed artificially
- Oral feeding problems include indifference to food, chewing food but not swallowing etc
- No RCTs comparing careful hand feeding to PEG feeding
- Observational studies find no benefit in
  - Improving nutrition
  - Maintaining skin integrity
  - Preventing aspiration pneumonia
  - Improving functional status
  - Extending life

Cervo et al Geriatrics 2006; 61(6):30-5
Finucane et al JAMA 199;282:1365-70
Sanders et al Clin Med 2004;4:235-41
<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduces excessive time spent in feeding allowing other activities</td>
<td>Removal of comfort/pleasure of oral nutrition if NBM</td>
</tr>
<tr>
<td>Reduces discomfort from coughing</td>
<td>Reduction in social interaction at mealtimes</td>
</tr>
<tr>
<td>Family and carers feel they have better control over situation</td>
<td>Discomfort of drier oral mucosa</td>
</tr>
<tr>
<td></td>
<td>Irritation of tube</td>
</tr>
</tbody>
</table>
Best practice in Dementia

- Proactive discussion about treatment of potential feeding difficulties with patient
- Assessment by full MDT to ensure that decisions re feeding are being made in patients best interests
- Efforts to deal with swallowing difficulties by careful hand feeding and changing consistency of diet
Enteral Tube feeding BANS report 2008

Enteral tube feeding in the community

- Gastrostomy: 77%
- NG tube: 16%
- Jejunostomy: 7%

Enteral tube feeding in nursing homes

- Gastrostomy: 90%
- NG tube: 9%
- Jejunostomy: 1%
Alternatives to PEG feeding should be available in the community

NG feeding should be possible at home, in nursing and care home environments

Requires more trained nutrition nurses in hospitals and in the community

PEG tubes should not be placed to enable placement of patients in particular care homes
CASE REPORT
Case report 1

- 50 year old woman with Kreutzfeldt Jacob disease
- Very severe dementia, bed bound, entirely dependent
- Cared for by husband at home
- In hospital with chest infection
- Not eating well. Team and family requesting PEG
How to decide to insert a PEG

- What is the underlying diagnosis?
- What is the mechanism of the oral feeding problem?
- Can the person eat and drink, and, if so, at what risk?
- Will this be a short or long term route of feeding?
- What is the patients overall prognosis?

Multidisciplinary approach involving:
  - Patient
  - Speech therapist
  - Dietician
  - Medical team
  - Nutrition nurse
  - Carers

Adapted from RCP Report 2010
Case report 1 (continued)

- Nutrition team involved
- Felt that poor oral intake was part of the progression of the disease and PEG shouldn’t be inserted
- Husband wanted PEG to reduce time spent on feeding
- Nutrition team felt that this would constitute inserting a PEG for administrative reasons
“PEGs be inserted only for medical reasons and should not be inserted for administrative ones ie saving time, money or manpower and should not be a substitute for good nursing care”
SUMMARY
Summary 1

- PEG tube placement is relatively simple and provides safe access for medium to long-term feeding
- PEG placement is not without potential complications
- 30 day mortality rate after PEG placement is high (mainly due to the underlying disease)
Summary 2

- PEG tubes should not be placed for administrative reasons
- PEG tubes are rarely indicated in dementia
- Decisions should be made with the patient where possible and by a multidisciplinary group
- PEG tubes rarely have a role in “end-of-life” care
Is the aim to maintain life or are we merely prolonging death?