Percutaneous Endoscopic Gastrostomy in Stroke and Advanced Dementia

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Objectives

• Role of Gastrostomy in nutritional support
• Consideration of Risks v Benefits
• Review of clinical vignettes
Intro

• The end of the “End of Life Care Pathway”
• Leadership Alliance recommendations July 2014.
• 1. Possibility of dying considered / communicated
• 2. Sensitive communication with Patinet and “inportant others”
• 3. Dying person and important others involved
4. “Important others” listened to and needs respected
5. Individual care plan
Percutaneous Gastrostomy

- First described in children in 1980
- Now commonly performed – 17000 procedures / year in UK
- Can be performed endoscopically (PEG) or image-guided (PIG)
- Significant Morbidity (site infection, bleeding, peritonitis) and Mortality
### Mortality

<table>
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<tr>
<th></th>
<th>30 day</th>
<th>6 month</th>
<th>1 year</th>
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<tbody>
<tr>
<td>S Yorks</td>
<td>11%</td>
<td></td>
<td>41%</td>
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<td>(1327)</td>
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<tr>
<td>Sweden</td>
<td>12%</td>
<td>37%</td>
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<td>(484)</td>
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<tr>
<td>Stroke(SY)</td>
<td>18%</td>
<td></td>
<td>49%</td>
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<tr>
<td>(SW)</td>
<td>19%</td>
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Possible prognostic factors

• Age
• Comorbidities (cardiovascular disease, diabetes, renal failure, concurrent infection)
• Indication (cancer, stroke, neurological disease, dementia, other)
• Serum albumin
• C reactive protein
Research

• Sheffield (Leeds et al-2011- Gast. Endoscopy, 74: 1033-9)
• Increased risk with:
  • Age>64
  • Albumin < 35; <25 g/l
  • Stroke / Neurological disease
  • Concurrent infection
Risk Prediction

• Multivariate analysis
• Age <60 v >60; OR 5.4
• Alb 25-34; OR 4.6: <25; OR 10.0
• Validated with Artificial Neural Network

• Sheffield Gastrostomy Scoring System
SGSS

- Age >60y  Score 1
- Alb 25-34 g/l  1
- Alb <25 g/l  2

- Risk 0  Mortality 0%
- 1  7%
- 2  21%
- 3  37%
C reactive protein

- Risk increased by CRP>10; OR 3.47
- Alb <30; OR 3.47
- Combined OR 7
Non insertion

- Sheffield (Kurien et al 2013; Clin Gast & Hep.; 11:1445-1450)
- Prognosis for patients refused PEG
- 1327 referrals; 324 declined

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<tr>
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<th>PEG</th>
<th>No PEG</th>
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<tr>
<td>30 days</td>
<td>11.2%</td>
<td>41%</td>
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<tr>
<td>1 year</td>
<td>35.5%</td>
<td>74.3%</td>
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Acknowledgements

• Prof DS Sanders – Dementia and PEG; 2000 Am J Gast
• John Leeds
• Matt Kurien
MS Nov 2012

- 78 F
- Dementia, epilepsy
- Unable to communicate, refusing medication and oral feeding
- Recurrent seizures
- NGT passed for feeding and anti epileptics (levetiracetam)
MS2

• What should we do?
MS3

- Family discussion (quoted risk 30-40% death)
- Second opinion from Gastro consultant
- Uncomplicated PEG insertion
- DST and CHC funding (package £47 K + family funding)
- Still alive and minimal admissions. Cared for at home.
JT1

• 85 F, atrial fibrillation, valvular heart disease
• Previously declined warfarin
• Admitted with pneumonia
• 24 h later aphasia and dense right hemiparesis
• Discussed with family and treated for pneumonia.
• Transferred to stroke unit and started NG feed
JT2

• Over next 5 weeks treated 3x for pneumonia
• Persisting dysphagia, aphasia, dense right hemiparesis, right sided inattention
• Dependent on NG feed
• Family discussion: “further treatment for pneumonia inappropriate; would not want to be like this so PEG not appropriate; do not want NGT removed”
What next?
Further family discussion; agreed not for reinsertion if NGT blocked or fell out

4 weeks later NGT blocked off. Palliative treatment and passed away.
• 92 F, dementia, in RH
• Admitted with large (8 cm) intracerebral haemorrhage with ventricular extension
• Poor prognosis discussed with family- they believe she will survive and get better
• Insistent on treatment of infection and supportive feeding
PG2

• Treated several times for chest infection
• GCS 3-5
• Discussions regarding palliation; family not receptive
• Still believe she will “get better”
• What should we do next?
• Second opinion : Neurologist
• Not PVS but minimally conscious state
• Courts would not make decision on withdrawal for 6 months
• Joint discussion – PEG insertion with regard to NH placement
PG5

- PEG inserted
- Developed PEG site infection
- Progressed to site abscess
- Abdominal wall dehiscence and PEG extruded
- Deceased
JP1

- 85 M, dementia
- Wife heard fall on stairs
- GCS 3, O2 sats 90%
- CT head and thorax / abdomen
- Haemo-pneumo-thorax
- Cerebral contusions, intra cerebral and subarchnoid blood
JP2

- Chest drain inserted
- Referred to stroke unit ? Primary ICH
- GCS 6-9
- Right hemiparesis
- Aphasia
JP3

- NG feed
- Chest drain removed at 1 week
- No improvement in GCS at 3 weeks
JP4

• Family discussion
• “Would not wish to be like this. We don’t think it would be right to insert PEG”
• No LPA or Advance Directive
• Primary Consultant : agreed with family view
• Second opinion : “Think we should provide feeding support while he has a chance to recover”
• Very distressed
• No improvement in cerebral state
• Family opposed to PEG insertion
• High Court ruling: “Sanctity of Life”. Ruled that feeding could not be discontinued despite view expressed several times to family members regarding artificial feeding.
• BMJ Leader Prof Raanan Gillon Aug 2012
JP6

- What should clinical team do?
JP7

- Involved Trust Solicitor
- Application to Court of Protection
- Acutely deteriorated left hydrothorax
- Palliated.
EW 1- May 2014

• 85 M dementia, T2DM on insulin
• General deterioration, increased confusion
• Retention, AKI, sepsis
• Pseudomonas UTI
• IV Tazocin
• Brittle diabetes due to sepsis, poor intake
• NGT inserted with difficulty
• Pulling out NGT; recurrent hypos
• Lacks capacity
• Family discussion re PEG
• Daughter (cancer) died after PEG
• Children opposed; wife (second) undecided
• Further discussion – not for PEG
EW3

- Extensive pressure sores on scrotum. Groins and ischial tuberosities
- NGT continued to promote healing
- Negligible recovery of intake (Bowl of Weetabix or fortisip)
- July: pressure sores healing
- Family discussion: Previously expressed view that he was ready to die. Son feels tube feed should be stopped. Daughter, wife feel we would be starving him to death.
• August : NGT blocked and removed
• Still on SC fluids
• Further discussion. Wife and daughter still opposed to withdrawal.
• Second and third opinions : Further feeding and fluid support not likely to alter prognosis.
• Where next?
EW5

- Condition stabilised on 500 ml fluid and 1 fortisip
- Unable to engage wife in discussions
- Slow decline and demised early November
Summary

• Discussed prognosis in patients requiring PEG
• Note 11% 30 day mortality (higher in stroke and Neuro disease)
• Note 25% of non PEG patients still alive at 1 year
• Prognostic scoring in selection
• CRP levels may help further
• Remains a challenging area