Feeding Tubes in Children with Neurodisabilities

Summary of an editorial by
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Changing picture over decades

- 1999: over 50% of children with CP had failure to thrive, over 25% presented with haematemesis.
- Poor nutrition and complications arising from it were the leading cause of mortality.
- Feeding tubes, dietetic input, complete formula feeds have led to longer survival (into 30s and beyond)

Reasons for a feeding tube

- Unsafe swallow
- Inadequate intake

- NGT followed by gastrostomy tube in early infancy

NGT or PEG?

- Both can deliver adequate nutrition
- NGT: misplaced, displaced, needs more frequent changes
- PEG: infection, misplaced, leaking, granuloma

- If going to be long term:
- PEG is generally less troublesome

PEG or button?

- Start with PEG:
- Fairly long lasting (2 years)
- Needs changing endoscopically
- Button:
- Neat
- Can be changed by parents
- Can be removed easily

Reflux

- Up to 80% of children with CP experience reflux
- Reflux or gastro-oesophageal reflux DISEASE?
- Reflux may be improved with a PEG as the lower oesophageal sphincter is not (potentially) held open.
- Use ‘anti-reflux’ medication wisely and cautiously. (Unlicensed in young children)

How are you treating reflux?

Not all reflux is due to LOS inadequacy

- The gastric fundus usually relaxes during a meal – when it does not, this can exacerbate reflux or independently cause vomiting or discomfort
- FUNDOPLICATION: can help when due to LOS insufficiency but my exacerbate other causes (loss of normal stomach contraction pattern - delayed gastric emptying – fermentation - gas production – more vomiting)
- Retching without vomiting can cause severe distress

Fundoplication

- Up to 50% loss of stomach volume
- Pain,
- Herniation of wrap
- Wrap can become ‘undone’

PEG-J (gastrojejunal) feeding

- In theory, should be better at reducing pneumonia than PEG+ fundo but poor quality evidence
- Does reduce ‘reflux’ when this is more likely due to foregut dysmotility (delayed gastric emptying, gastroparesis)
- Tube can be displaced – requires X-ray control to re-site, 6 monthly, often with GA
- This means hospital admission, probable o/n stay, iv fluids

PEG-J

- Continuous feeding required (minimum 14 hours/day)
- Limits activities (and development)
- Burden to carers
- Hypoglycaemia

Foregut dysmotility

- Can be caused by constipation (usually severe) or faecal impaction
- This may be short lived or chronic resulting in worsening feed intolerance, recurrent regurgitation and vomiting

Chronic intestinal pseudo-obstruction

- Gradual gut decline to pre-terminal stage
- Recurrent episodes of obstruction in the absence of a mechanical cause
- May need TPN for a ‘gut rest’

Protein content of feed

- Can affect gastric emptying time
- Whole protein
- Hydrolysed protein
- Amino acid based

Conclusion

- Think about what is going on
- Try to match management to cause
- Children are surviving but challenges are different.