A Bad Case of Gas

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Case

- 61 year old male
- Limb onset MND of 4 years duration
- NIV - started 15 months previously (increased to all day)
- PEG fed - 10 months previously
- Symptoms
  - pseudo-obstruction (2 months prior to admission),
  - Fullness, bloating, diarrhoea

(common side effect of enteral feeding in MND (1) and in NIV used in MND (2))
Case

• Medical history:
  – thromboembolic disease, fatty liver disease, C5/C6 spinal decompression for degenerative disease.
  – several previous admissions for pneumonia.

• Medications
  – Pseudo-obstruction- anticholinergic medication previously discontinued
  – Senna 15 mg -daily
Feeding regimen

• On admission:
  – Standard feeds
  – Fortisip Compact Protein 125mls TDS, Fortisip Compact 125ml BD, Fortisip Compact Fibre OD(1800kcals, 84g Protein, 4.5g of fibre)

  – Bolus feeding (missing feeds due to symptoms)

  – did not appear to be tolerating well
Symptoms

• Diarrhoea /abdominal bloating
  – ↑ dyspnoea

• Drooling
  – Atropine 1% drops sublingually four times a day restarted
  – Hyoscine patch 1 mg/72 hours)
Feed changes

• Infectious causes of diarrhoea were excluded by formal culture.

• Simethicone trialled - ineffective

• Trial of Vital 1.5kcal bolus feeds (peptide based feed)
  – 200mls x 5 per day
  (1470kcal, 67.5g protein, 0g fibre)
  – Then switched to continuous feeding overnight via PUMP feed
Evidence for feed changes

• Peptide based feeds
  – Shown to improve outcomes (3)
  – Increase body weight.
  – Increase in mean total protein and serum albumin,
  – Improved tolerance therefore ensuring total nutrition requirements are met (4)

• Rapid or faster infusion of feed can be a cause of diarrhoea hence continuous feeding trialled (5)

• Only slight improvement shown
Other therapies

- Metoclopramide 10 mg TDS (5)
- Mirtazapine commenced for low mood
- Manual venting of the gastrostomy tube
- Bloating and nausea continued which still necessitated stopping the feeds early
- Metoclopramide ↑ to 20 mg TDS
Farrell Valve system

- Farrell valve system helps ↓gastric pressure

- Shown to be useful to relieve gastric pressure in pseudo obstruction (6)
Outcome

• Reduced bloating
• Abdomen less distended
• Stools became more formed
• Bowels opened regularly
• Weight increased 81kg – 84.4kg
• Mood improved.

• Interruption in Farrell Valve supply led to the increase in symptoms
Bowel frequency and stool type.
Discussion and questions

- Peptide feeds/ continuous feeding
- Cost: Medications – V - cost of Farrell Valve
- Metoclopramide, may have helped but as the dose ↑ coincided with the ↑ manual venting of the gastrostomy-not possible to separate their effects.
- Started eating more orally (increased QoL)
- ? Mirtazipine may have had an effect on gastrointestinal systems (7)
- Further study is warranted
References


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