Refeeding syndrome: Identification of those at risk – Decision Tree

1. Who is at risk?

Establish BMI, degree of unintentional weight loss in the last 3-6 months, period of little or no nutritional intake, potassium magnesium and phosphate levels and any history of excess alcohol or drugs such as insulin, chemotherapy antacids and diuretics.

Any one of the following¹:
- BMI < 16kg/m²
- Weight loss of >15% over 3-6/12
- Poor intake for 10 days
- Low electrolytes

Any two of the following¹:
- BMI < 18.5kg/m²
- Weight loss >10% over 3-6/12
- Poor intake for 5 days
- Drug history as above

Patient is at risk of refeeding syndrome: refer immediately to the dietitian and/or nutrition team.

Ensure adequate thiamine and B vitamins before and during the first 10 days of feeding: consider IV vitamin B preparation (e.g., pabrinex), or high dose thiamine (200-300mg/day) and Vit B Co strong 1-2 tablets/day. Seek assistance from dietitians or pharmacists.

Include a balanced multivitamin and trace element supplement daily.

see 2 for feeding and electrolyte recommendations, and monitoring.

The BAPEN Principles of Good Nutritional Practice (Decision Trees) have been prepared to assist health care professionals in the decision making processes surrounding nutritional care. Users of these materials may only do so on the condition that they exercise their own professional knowledge and skills. BAPEN does not owe a duty of care and cannot accept liability to anyone using these Decision Trees.
2. Refeeding: starting to feed safely

Commence feeding: can the oral route be used?

Yes

Consider oral nutrition supplements or naso-gastric feeding if not adequate. Seek dietetic input

Concerns

Assess swallow referring to Speech and Language therapist, and consider placing a naso-gastric tube

No

Consider parenteral nutrition via appropriate venous access

Commence nutrition at a maximum of 10kcal/kg/day increasing to meet needs by 7 days

High risk patients are those with BMI<14kg/m² or prolonged poor intake of >15 days and should commence at 5kCal/kg/day

Measure electrolytes: even if normal, replace potassium, phosphate and magnesium. Only withhold supplementation if levels are high

Monitor glucose (BMIs) several times per day, and observe potassium, calcium, magnesium, phosphate and sodium closely as well as fluid balance clinically

The more rapidly calories are delivered and the rate increased, the greater the demand on circulating electrolytes; thus there will be an increased risk of re-feeding syndrome

Keep fluid input low, but enough to maintain renal function

Restrict sodium replacement
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References


2. Safe placement and use of NG tube principles. Please refer to NPSA guidance too

3. Access for PN and choice of lines provided in further decision tree

4. Prefeeding replacement is not required. Potassium requirements likely 2-4mmol/kg/day and phosphate requirements likely 0.3-0.6mmol/kg/day orally, enterally or intravenously. Magnesium is poorly absorbed orally and can precipitate diarrhoea: oral replacement 0.4mmol/kg/day or 0.2mmol/kg/day intravenously

5. Upon commencement of feeding renal sodium losses stop, leading to both sodium and water retention. Aim for fluid replacement 20-30ml/kg/day and restrict sodium <1mmol/kg/day

Further Reading

- NICE guidelines on enteral feeding
- NPSA guidelines on safety with NG feeding
- NNNG NG feeding guidance
- ESPEN guidelines on enteral feeding: http://www.espen.org/espenguidelines
- ASPEN guidelines on enteral feeding http://www.nutritioncare.org/library.aspx
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