



ESPEN Congress Glasgow 2002

Is there a place for diabetic tube feeding
formulations?

Clinical Applications
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Is There a Place for Diabetes Specific Feeds in Your Clinical Practice ?

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Keywords

enteral nutrition - delayed gastric emptying - overfeeding
glycemic control

Estimating Nutritional Requirements

- ‘ During hospitalization, avoidance of overfeeding is likely to be more important than the use of specific enteral formulae’
McMahon and Rizza 1996
- Majority of patients with diabetes are overweight or obese - how should their nutritional needs be calculated?
 - Many strategies proposed
 - Currently no consensus (Ireton-Jones and Francis 1995)

Delayed Gastric Emptying in DM

- DGE present 30-50% longstanding dm
- Gastroparesis - grossly DGE less common
- Symptoms
 - nausea
 - vomiting food consumed days earlier
 - abdo pain, bloating, fullness
 - swings in bgl with frequent hypos
- Worsening symptoms with
 - poor diabetes control >15mmol/l (270mg/dl) gut motility ↓
 - illness, uraemia and malnutrition

Treatment for Gastroparesis

- Prokinetic drugs
- Optimal diabetes control 5-8mmol/l (90-140mg/dl)
- Improve nutritional status
- Achieved by PEJ - post pyloric feeding
- Condition is reversible - gradually reintroduce liquids then solids

Intensive Insulin Therapy in Critically ill Patients

Van Den Berghe et al, NEJM, 2001; 345: 1359-1367

- Surgical ICU, 1548 patients
- Randomised control study
 - Intensive insulin therapy (IIT) blood glucose target 4.4 - 6.1mmol/l (80-110mg/dl)
 - Conventional treatment (CT) blood glucose targets 10 - 11mmol/l (180-200mg/dl)
- Early enteral nutrition
- Only 13% had dm, yet 40% CT and 99% IIT required insulin
- CONCLUSION
 - Substantial reduction in mortality and morbidity with intensive insulin therapy in critically ill

Standard Guidelines ?

Standard feed regimen

e.g. Three bolus feeds a day



Standard insulin regimen to match

e.g. soluble insulin with each feed, isophane overnight



Guidance on blood glucose monitoring

e.g. prior to each feed and bedtime



Reduces excessive fluctuations in blood glucose levels (Kerr et al 2002)

Managing the Feed

- Only increase the feeding rate if glucose levels within target range
- Consider review of diabetes treatment when changing feed regimen (grams carbohydrate per hour):
 - feed rate
 - timing of feed
 - feed type
 - method of delivery - pump vs. bolus

Short Term Feeding

No practical advantages or clinical benefits to using a diabetes specific feed in short term if target blood glucose levels achieved through improved patient management.

Dietitians can contribute to this by:

- Avoiding overfeeding in obese patients
- Ensuring feed and diabetes treatment match by
 - understanding the action of diabetes treatments
 - liaison with diabetes team
- Keeping within agreed blood glucose targets
- Considering the use of standard guidelines and involving diabetes staff in nutrition team

CONCLUSION

- No practical advantages or clinical benefits to using a diabetes specific feed in short term
- Practical advantages in the long term somewhat depend on level of improvement in blood glucose brought about by dm feed
- Possible clinical benefits in long term feeding (Craig et al 1998)
- Whilst we await more research, can clinical experience inform us further?

No references provided by the author(s)