

1520400 - A Case for Continuous Infusion of Parenteral Nutrition: How a Hyperemesis Gravidarum Patient Realized Euglycemia and Weight Gain Throughout Parenteral Nutrition Provision Including Transitioning to Full Oral Intake While Meeting Nutrition Needs

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Introduction: Our intent is to report a case study of a Hyperemesis Gravidarum (HG) patient who was successfully managed and transitioned from full Parenteral Nutrition (PN) to full oral intake by a Home Nutrition Support Team (HNST) using continuous infusion of PN, weekly phone interviews, and a detailed kilocalorie count employed once the patient was eating a substantial amount of food orally.

HG can be defined as extreme, persistent nausea and vomiting that likely leads to dehydration, electrolyte imbalances, and a loss of > 5% of body weight. HG is a rare occurrence. It is estimated that between 0.5 up to 2% of all pregnancies are affected by this disorder. In the most severe cases ketonuria, vitamin deficiencies and abnormal liver enzymes may be present. In these severe cases, PN risks verses benefits should be considered. PN can be an appropriate choice as fetal growth and development are affected when nutrition intake is severely restricted for extended periods of time. Close monitoring of a HG patient on PN in the home is essential in order to minimize metabolic complications, (especially glucose and triglyceride levels) help assure appropriate weight gain, achieve positive nitrogen balance, and assist , when appropriate, in transitioning toward a complete , nutritionally balanced diet.

Description:

36 year old overweight female

Gravida 5, Para 4

Four vaginal deliveries with most recent pregnancy (child # 4) complicated by HG not treated with PN.

Admitted to hospital at 10 weeks pregnant for vomiting, weight loss and no oral intake for over one month.

PN initiated in hospital at 24 hours continuous with plan for discharge to home PN.

Through initial assessment and close weekly monitoring during twelve weeks of Home PN therapy, the HNST recommended and was granted permission from the attending physician to:

1. Increase kilocalories to goal
2. Adjust electrolytes as needed
3. Successfully wean patient from PN after performing a detailed kilocalorie count

All of this was accomplished while intentionally keeping patient on a continuous PN infusion in order to maintain euglycemia.

Results:

Glucose remained within normal range 11 out of 12 weeks (note: One abnormal glucose = 109 mg/dl)

Albumin remained in normal range 11 out of 12 weeks (note: One abnormal Albumin= 3.3 g/dl)

Triglycerides remained in normal range 4 out of 11 weeks.

Weight gain was achieved

Conclusions: HG patients may benefit from continuous infusions of PN if blood sugar levels are a concern.

The multidisciplinary team approach is critical in assisting the physician manage week to week electrolyte imbalances and transitioning to appropriate oral intake.

A detailed kcalorie count may be helpful in developing a transition regimen to maintain acceptable blood sugar levels while transitioning toward full oral intake.

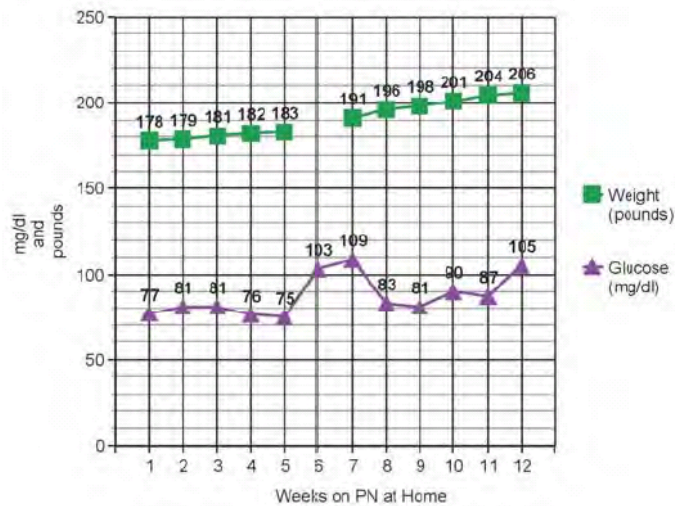


Figure 1. Results of weekly body weight and glucose values. Weight (purple line) Glucose (green line)

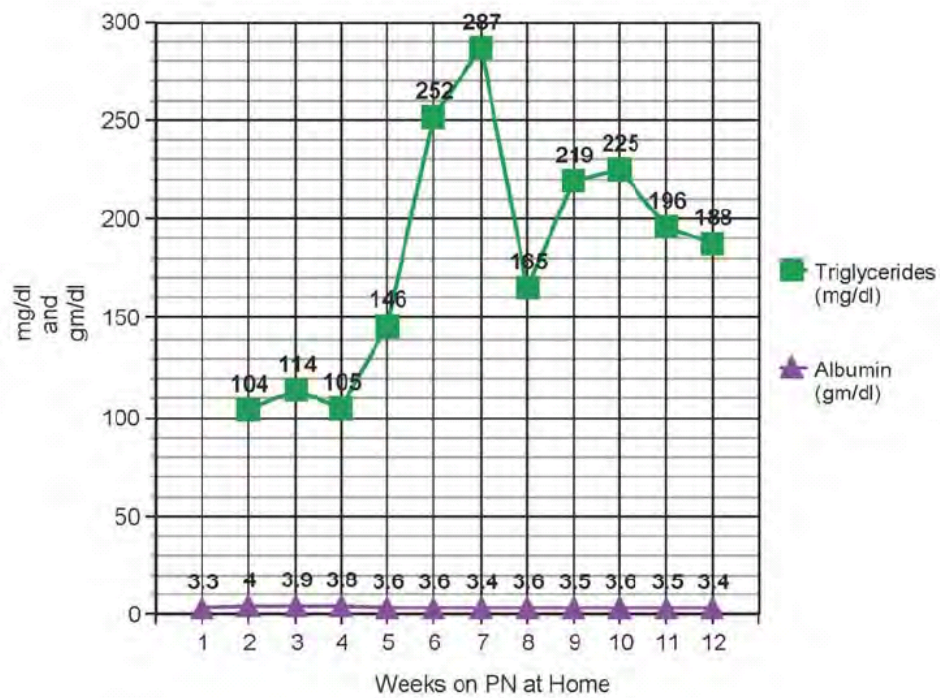


Figure 2. Results of weekly triglycerides and albumin values. Triglycerides (green line) Albumin (purple line)

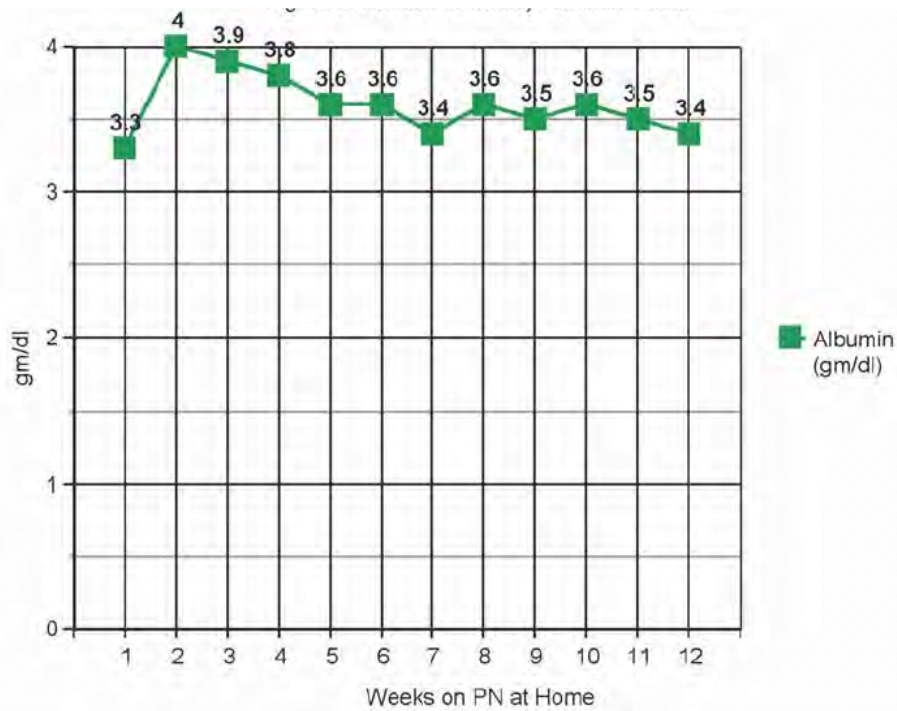


Figure 3. Results of weekly albumin values