Practical Management of Home Tube Feeding

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Conflict of Interest Statement

- No financial or nonfinancial relationships
- Non-endorsement of products
- Information presented is based on best known clinical evidence in addition to experiential data.
Objectives

- Case study review: Debbie and David

- Set yourself up for success. Making your feeding regimen work for you at home.

- You have options at home: Review of formulas and feeding methods

- Your tube feeding shouldn’t hurt! Identifying and solving tube site complications.
Home Enteral Nutrition Monitoring

Tolerance of Tube Feeding

- Diarrhea
- Nausea and vomiting
- Abdominal bloating
- Cramping
- Tube-related issues

Concern

Clinicians unfamiliar with monitoring requirements & treating complications
Caution
Do Not Overfill

Warning
Exhaust Fumes May Be Deadly
Debby

Complaints:
  • Leaky tube
  • Red, inflamed, painful tube site
David

Complaints:
- Underweight
- Not gaining weight
- Significant foamy reflux with constant coughing
- "Gooey" tube site
David’s Journey Back from Malnutrition

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Formula Selection

**Standard**
- Intact protein, semi-synthetic, with and without fiber
- Caloric density — 1.0, 1.2, 1.5, 2.0 calories/mL
- Organic options available

**Hydrolyzed protein**
- Semi-elemental or elemental
- Caloric density — 1.0, 1.2, 1.5 calories/mL
- Organic option available

**Disease-specific**
- Diabetic, renal, hepatic, pulmonary

**Blenderized**
- Commercially prepared
- Organic options available
- Home blend
Bolus or Syringe

Potential Benefits of Use

- Most similar to a typical day’s meal schedule
- May be less time-consuming
- No special equipment needed

Potential Disadvantages of Use

Contraindications

- May result in feeling of fullness, diarrhea, reflux/regurgitation
- Requires sufficient adequate dexterity
- Not indicated for JT or NJ patients, or consumers with pre-existing reflux
Gravity Bag

Potential Benefits of Use

• Larger feedings
• Convenient
• Little equipment needed
• Some control of rate

Potential Disadvantages of Use

Contraindications

• Limited control of rate
• Not indicated for JT or NJ tubes
Bolee Bag Bfed Delivery System

Potential Benefits of Use

- Reusable
- Portability
- Gravity or squeeze/bolus method
- Works with blended and standard formula

Potential Disadvantages of Use

Potential Disadvantages of Use

Contraindications

- Lack of familiarity by prescribers
- Limited control of rate
- Not indicated for JT or NJ tubes
- Availability via Infusion Provider or DME
Pump

Potential Benefits of Use

- Controlled rate specifically for JT or NJ feeding
- Decreased reflux
- Ability to feed at anytime, day or night
- Provision of simultaneous nutrition and hydration

Potential Disadvantages of Use

Contraindications

- More supplies and equipment needed
- Requires understanding of pump programming
- Feeding typically occurs over a longer period of time
Normal Healing

What is normal healing of a G-tube site?
Gastrostomy Tube Placement
PEG Site Infection

Infection at the tube site is the most common complication

- Incidence rate ranging 3–30%

Factors that increase risk of infection:

- Diabetes
- Obesity
- Malnutrition
- Chronic steroid use


PEG Site Infection (cont’d)

- Use of a pre-procedure dose of a broad-spectrum antibiotic can reduce incidence from 18% down to 3%.

- Treatment Options: Address the Cause
  - Topical Antibacterial Ointment
    - Bacitracin — Disrupt gram-negative and gram-positive bacteria
    - Neosporin® / Triple Antibiotic Ointment — Likely will not be effective
  - Systemic Antibacterial via G-tube

Bacterial Infection

Problem:
Improper cleaning regimen
Lack of tube feeding expertise
Lack of homecare support
Purchasing supplies over the counter

Solution/Intervention:
✓ Daily cleaning regimen education
✓ Systemic antibacterial treatment via G tube
✓ Referral to home infusion company
✓ Insurance coverage for formula and supplies

1 week after antibiotic initiation
Bacterial Infection with Cellulitis
Bacterial Infection with Cellulitis
Hypergranulation

- Hyperplasia of granulation tissue; hypertrophic granulation; proud flesh
- “Spongy, fragile, exuberant mass of tissue”
- Highly vascular, painful, and bleeds easily
- Inhibits epithelialization and increases risk of stoma site infection
Hypergranulation

Common causes:
- Excessive movement of tube
- Excessive use of hydrogen peroxide
- Body’s own response to the presence of the tube

Treatment options: Address the cause
- Hydrocortisone cream
- Silver nitrate
- Cauterization
Hypergranulation
Hypergranulation

Problem:
Excessive movement of feeding tube

Solution/Intervention:
- Stabilize tube
- Instruct on proper placement of external Bolster
- 2 x day application of hydrocortisone cream x 2 weeks
Yeast Infection at G-Tube Site

Fungal infection of any of the *Candida* species

Common symptoms:
- Pustule with secondary lesions of papules from abraded pustules and plaque
- Erythema, maceration, and pruritus
- Satellite lesions

Common causes:
- Excessive leaking or bleeding at stoma site
- Prolonged use of moist dressing at stoma site
Yeast Infection at G-Tube Site

Treatment Options: Address the Cause

- **Barrier cream** to protect skin from moisture
- **Hydrocortisone cream** to manage inflammation and erythema
- **Antifungal** to treat yeast
  - Lotrimin® (Clotrimazole) Over the Counter
    - Blocks the manufacture of ergosterol, a crucial material of the yeast cell wall, so it becomes leaky and the yeast die.
  - Mycostatin® (Nystatin) Prescription
    - Attaches to the yeast’s ergosterol, then forms artificial holes in the yeast wall that cause the yeast to leak and die.
Yeast Infection

2 Weeks of Intervention
First Impression?
Yeast Infection

Day 1

Day 15

Day 45
Irritation and Leakage at Stoma Site
Mold in Tube
Tube Degradation
Gastrostomy – Internal View

internal bumper w/ gastritis
Conclusion

- Tube Feeding Shouldn’t Hurt
- Build your tribe of knowledgeable clinicians!
- Home care clinician knowledge of complications and their treatment is imperative
- Design a homecare friendly plan that meets your lifestyle as well as your clinical needs.
Thank you!