Caring for Children with Special Healthcare Needs

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Objectives
- Differentiate types of feeding tubes
- Learn the different insertion techniques
- Trouble shoot feeding tube problems
- Learn different long term IV access

Financial Disclosure
None
Mention of brand products do not denote endorsement

Special Need Children
- Physical
- Developmental
- Behavioral/Emotional
- Sensory impaired

Surgical Support
- Feeding access
- IV access
- Antegrade enema
- Enterostomy

FEEDING ACCESS
Nasogastric Feeding Tube

Gastrostomy Tube

Skin-Level Balloon Based Tube

Bard Gastrostomy Tube

Insertion Techniques

- Open/Stamm gastrostomy
- Laparoscopic gastrostomy tube
- Percutaneous endoscopic gastrostomy (PEG)

Stamm Gastrostomy
Laparoscopic Gastrostomy Tube

PEG

Long Tubes

GJ Tube

Feeding Jejunostomy Tube
GJ Tube

TROUBLE SHOOTING

The Leaking Stoma
- Increase intra-abdominal pressure—constipation, vomiting, coughing, positive pressure ventilation, heavy breathing, crying, weight change
- Balloon has deflated
- Tube displacement
- Incorrect size, improper stabilization/positioning
- Poor wound healing
- Inability to decompress stomach

What do you do?
- Check balloon. Add more water if necessary
- Change rate of feeds
- Protect skin
  - Use warm water to remove dried leakage to prevent further buildup or irritation
- Change tube size if inappropriate for stoma size (use measuring device)

Tube Obstruction
- Causes
  - Inappropriate med administration (granules)
  - Thick formulas
  - Failure to flush
  - Pill Fragments
  - Defective tubings
- Prevention
  - Flush, flush, flush!
  - Use liquid medication only
  - Ensure proper solution being given through tube

Tube Obstruction Solutions
- Check for kinks, make sure clamp is open
- Flush with warm or carbonated water through a small syringe
- Change extension
- When all else fails, replace the tube
Clogged Feeding Tube

- Gentle back and forth flush of warm water using 30 mL or 60 mL syringe.
- Allow to sit for 5 minutes and repeat.
- Try enzymatic declogging agent such as crushed Viokace or Creon, meat tenderizer or soda.

Peritubal Dermatitis

- Causes:
  - Leakage of gastric contents
  - Overuse of cleaners or other topical medications
  - Bolster too tight
- Tx: Correct Cause
  - May use acid blocking agents
  - Barrier products
  - Ensure proper tube size—changing to larger tube is NOT recommended because it enlarges stoma
  - Tube mobility—secure as much as possible
  - May need to make NPO for some time to heal
  - Use anti-fungal cream if there are satellite lesions

Granulation Tissue/Formula Leakage

- Causes
  - Body trying to heal around poorly fitting tube
  - Lack of stabilization; tube moving around stoma too freely
  - Excessive moisture, occlusive dressings
- This is NOT an infection!!!!!!
- Treatment
  - Direct pressure when bleeding occurs
  - Silver Nitrate
  - Use tea tree oil (Mix 10 drops of tea tree oil in 30 ml of water and use a Q tip to apply a dab to the granulation tissue twice daily)
  - Stabilize tube
  - Identify better fitting tube

Granulation Tissue
What to do when G tube falls out within the first month after insertion

- Cover Tract with gauze and tape
- Bring to ED or call surgery ASAP
- Because tract is not well established, may go into “false tract...”i.e. you could feed through the peritoneum or abdominal wall

What to do when G-tube falls out more than one month after insertion

- PLEASE put the same tube, replacement tube, Foley catheter or MIC tube into the stoma AS SOON as dislodgement is discovered.
- If it is not replaced quickly, the stoma may close spontaneously
- Insert the tube, inflate the balloon, aspirate looking for stomach contents

If you replaced the tube....

- and YOU ARE FEELING UNEASY ABOUT THE TUBE BEING IN PROPER PLACEMENT – MAY NEED A TUBE STUDY!
- If you are replacing the tube with a Foley catheter, make sure the balloon is pulled up to skin level and the tube is secured to the skin to prevent migration.
- If the child is vomiting, pull the Foley up. Balloon may block pylorus.
- Replace with a proper G tube within a week

G-tube maintenance

- Flush with water daily and after giving medications or finishing a feeding to prevent clogging
- Tube can be electively changed every 3 months
- Proper size is critical. Weight loss or weight gain will require a change in size.

How to clean a G-tube

- Wash your hands
- Use a basin of warm water and gentle soap
- Gently clean around tube with washcloth
- Gently clean under the tube with Q-tips
- Remove all crusted material. A mixture of ½ strength peroxide and water may help with crustiness.

“Button Buddies”

- http://mybuttonbuddies.com/
How to secure a G-Tube

• Keep a drain sponge under the tube and change frequently. Button buddies are great.
• Keep extension tubing at 90 degree angle and anchor to skin with tape to prevent drag on the stoma.

Tube Migration/Malposition

• Symptoms:
  – Vomiting
    • Balloon obstructing duodenum
    • GERD
  – Diarrhea:
    • Gastrocolocutaneous fistula—get barium enema
• Treating:
  – Measure length of tube from skin
  – Obtain contrast study—inject through tube
  – CT Scan

Gastrocolocutaneous Fistula

IV ACCESS

PICC

• 10 mL syringe is necessary for flush and draw
• Keep site clean and dry. No bath or shower unless line is protected.
• Sterile dressing change once weekly and as needed
• Does not need surgery to remove
• Protective sleeve is recommended
• Monitor site for signs of infection or unusual swelling
• Need to be flushed at least once daily
Broviac/Hickman Catheter

- Tunneled central venous catheter
- May be double or single lumen
- Intended for long term use
- Can be repaired if damaged externally
- Weekly sterile dressing change and as needed
- Must be kept dry. No swimming or bathing

Broviac/Hickman Catheter

- Scrub the hub for 10 seconds before accessing
- Use the 4 Ps of flushing: Push, Pause, and Positive Pressure.
- Use only 10 mL syringes to flush or give medications.
- Dressings are changed weekly and as needed with sterile technique.

When to seek help?

- Meet resistance when flushing – DO NOT FORCE IT!
- Ballooning of the catheter with a flush.
- Blood is visible in catheter that cannot be flushed away.
- Cuff is visible
- Skin breakdown, inflammation, drainage at insertion site.

Ethanol – a little alcohol is good for everyone

- Given in small amounts to treat or prevent catheter infections
- Only used in silicone catheters such as Broviac. NOT TO BE USED IN PORT OR PICC.
- Does not produce a significant blood alcohol level.
- DON’T EVER MIX YOUR ALCOHOL WITH HEPARIN!! It will precipitate.
**MediPort**

- Long term venous access device
- Requires a needle inserted into the skin to access – can only be accessed with appropriately sized Huber needle
- Pre-medicate with EMLA prior to access
- Can be used to draw blood or give fluids/TPN.
- Visible bump on skin
- Safe for swimming and bathing
- Huber needles need to be changed every 7 days if left accessed
- Dressing needs to be changed every 7 days if left accessed

**Patients with tubes and catheters!**

**Thank you for your attention**