BEST NURSING PRACTICE IN THE SCHOOL ENVIRONMENT, PART 2
July 2016
Wendy Mosiman, DNP, PMHNP-BC, FCNS, RN-BC

OBJECTIVES
1. Demonstrate administration of tube feeding
2. Demonstrate medication administration via a gastrostomy tube
3. Explain clean urinary catheterization
4. Discuss suprapubic catheters
5. Discuss the Vagus Nerve Stimulator
6. Discuss ITB (Intrathecal Baclofen Therapy)

CARE OF THE STUDENT
## Gastrostomy Tube Feedings and Medications

### Traditional Gastrostomy Tubes
- Malecot, dePezzar
- Rubber latex, mushroom tip internal stabilizer, Hollister attachment device external stabilizer
- No med port, uses rubber band for closure
- Sometimes temporary preparing for button

### Percutaneous Endoscopic Gastrostomy
- PEG tube
- Silicone, dome shape internal stabilizer, crossbar/round external stabilizer
- Feeding port, med port, CM calibrations on tube

### Balloon Type G Tubes
- Foley Catheter
- Silicone, balloon internal stabilizer, external stabilizer needed
- No med port, uses rubber band for closure
- Sometimes temporary preparing for button
- Can also be used as replacement feeding tube

### Balloon type G-tube
- Silicone, balloon shape internal stabilizer, disc external stabilizer
- Feeding port, med port, CM calibrations on tube

### Low Profile G tubes Button (Bard)
- Requires well healed G Tube tract
- Silicone, device at skin level, mushroom tip internal stabilizer
- One way valve base, requires correct fr. size attachments to decompress/feed

### Low Profile G tubes Balloon Type (Mic KEY, MINI)
- Requires well healed G Tube tract
- Silicone, device at skin level, H2O balloon internal stabilizer
- One way valve top, requires universal attachment to decompress/feed
GASTROSTOMY TUBE FEEDINGS AND MEDICATIONS

Gather supplies:
- Non sterile gloves
- Towel, wash cloth
- 5 – 10 mL syringe
- Stethoscope
- pH testing kit
- Prescribed enteral formula, flush solution
- Feeding set up – tubing, bag or large syringe, pole, pump as needed

Examine site for redness, swelling, pain. May or may not have a dressing.

Markings on gastrostomy tube - "Graduation marks"; compare before each feeding to see if tube has moved. (Some have no marks)

Assess for distended abdomen, high pitched bowel sounds, nausea, vomiting.
GASTROSTOMY TUBE FEEDINGS AND MEDICATIONS

Check for Stomach Contents.

- Attach a Monoject catheter tip syringe and containing 10 ml of water to the tube (may need an extension set) feeding port.
- Pull back on the plunger. When you see stomach contents in the tube, flush the tube with water.
- Stomach contents are normally yellow or clear unless there is food in the stomach. If you feel resistance as you inject the water, pull back stomach contents again, then try to re-inject the water.
- Check for leaking around the stoma.

GASTROSTOMY TUBE FEEDINGS AND MEDICATIONS

Measure Residual Stomach Contents.

"Residual" is the amount of gastric fluid and formula left in the stomach four hours after feeding.
The stomach may not always empty completely, and the amount of residual varies. It may also depend on activity or body position. Check for residual if:
- The formula backs up in the extension tubing, or
- The student feels nauseated.
Generally, replace the residual back since it contains important electrolytes and nutrients. Check the residual again in 30 minutes and resume feeding if the amount is less than you obtained at the first check.

GASTROSTOMY MEDICATION ADMINISTRATION

After assessing gastrostomy site, prepare for administration of medications or feeding.

1. Have student sitting with head elevated >30-45°
2. Flush tube with water, then administer liquid medication. Flush between each medication 20 mL and after the last medication. (This helps maintain patency of the feeding tube.)
3. Feedings and medications should be at room temperature when administered.
INTERMITTENT OR BOLUS FEEDING

1. Remove plunger from syringe & attach barrel of syringe to end of tube – 60 mL syringe with catheter tip

2. Fill syringe with amount of formula. Elevate syringe no more than 18 inches above insertion site, and allow it to empty gradually by gravity. Keep solution in syringe at all times. Add 30 – 60 mL of water at the end. Avoid getting air into the stomach.

3. If a feeding bag is used, prime tubing and attach tubing to end of feeding tube. Set rate by adjusting roller clamp on tubing or placing on a feeding pump. Change bag every 24 hours.

4. Student should remain upright for 30 min after feeding

THE VAGUS NERVE STIMULATOR

- Implanted device (usually left chest)
- Send an electrical impulse to brain via the vagus nerve
- Occurs every 5 minutes for 30 - 60 seconds
- For patients with uncontrolled seizures who have failed other therapies
- Magnet activation to abort or decrease intensity or length of seizure if needed

Gravity or pump feeds
VAGUS NERVE STIMULATOR MAGNET

How to use the stimulator magnet

- Place the magnet over the system for a count of 3 seconds then remove.
- Wait 60-90 seconds before using the magnet again.
- Number of times it can be used per seizure varies.
- Move on to next seizure plan intervention- meds?
- Plan must include when to call 911
- Magnet should be with the child at all times.

INTERMITTENT CATHETERIZATION

The insurance companies are driving the method or type of catheter to be used: clean vs. sterile catheters

PROCEDURE FOR URINARY CATHETERIZATION (CLEAN TECHNIQUE)

1. Wash hands
2. Apply clean gloves for nurse, optional for student.
3. Wash perineal area appropriately
   - For male: Grasp penis and hold at 90° angle; if foreskin present retract. Using sanitary wipes, first wipe the tip of the penis, then move outward. 3 wipes should be used.
   - For female: Using sanitary wipes, clean inner labia (Rt & Lt) each separate, then clean down the center using 2 more wipes.
4. Lubricate catheter and insert into urinary meatus until urine starts flowing
5. Collect urine until drainage stops
6. Throw away urinary catheter OR if reused clean and store
PROCEDURE FOR URINARY CATHETER CLEANING

If catheter is reused, follow these cleaning steps:
- Clean catheter with soap and water
- Forcefully rinse the catheter lumen with tap H2O
- Allow catheter to air dry
- Store in a container
- Plastic catheters should be thrown away when the plastic looks cloudy. This is about once a week.

SUPRAPUBIC CATHETERS

Urine usually drains into a collection bag
- Supplies at school
  - Extra catheter
  - Extra collection device if possible
- If catheter comes out:
  - Lubricate new catheter
  - Slide into stoma
  - Inflates balloon
  - Reconnect to drainage system

Bladder program
- Catheter clamped (not connected to drainage device)
- Periodically unclamp and drain to empty bladder
- May need a urinal to catch bladder contents
- May need extra set of clothes at school
- Older children may do this by themselves
- May need more privacy such as the health room restroom
- Younger children may need assistance
IBT - INTRATHECAL BACLOFEN THERAPY

Antispasmodic drug

- Can be taken orally or administered intrathecally
- Helps control spastic diplegia (Cerebral palsy for example)
- Intrathecal administration gives a more consistent delivery
- Orally, is taken several times a day

INTRATHECAL BACLOFEN PUMPS

- Implanted pump (usually abdomen)
- Catheter is threaded into spinal column to deliver med into fluid
- Delivers small quantities of baclofen continuously
- Helps diminish spasticity and rigidity
- Programmable externally
- Complications:
  - Infection
  - Overdose of medication

AMERICAN ACADEMY OF PEDIATRICS
REGISTERED NURSE IN EVERY SCHOOL

The policy statement, published in the June 2016 issue of Pediatrics (published online May 23), calls for a minimum of one full-time registered nurse in every school. The policy replaces a prior version published in 2008.
ONLINE RESOURCES

http://www.mic-key.com/home.aspx
Online resources for the Mic Key button

http://www.bardpv.com/portfolio/low-profile/
Online resources Bard Button

http://us.livanova.cyberonics.com/
VNS online resources

http://www.baclofenpump.com/
Medtronic Baclofen Pump

http://www.childrensmercy.org/feeding-and-gastrointestinal-access/
Enfi changes

REFERENCES


ICnca.ca/PD1488Interm:HentCathbook.pdf
Baclofen Pump Implants ( Intrathecal) Emory University School of Medicine – Department of Pediatrics, www.peditrics.emory.edu/divisions/neurology/baclofen.html.

Information on the Vagus Nerve Stimulator (VNS) for Schools – Medical University of South Carolina, www.muschealth.com/epilepsy.

Pediatric Nursing Procedures 2013. Bowden & Greenberg.