NICU: Nasogastric/Orogastric Tube Placement

Site Applicability

St. Paul's Hospital, Neonatal Intensive Care Unit (NICU)

Practice Level

Specialized: NICU Registered Nurse (RN)

Requirements

- An order is required to place a feeding tube.
- Feeding tubes are inserted by any NICU RN.
- Feeding tubes will be changed every 72 hrs.
- Feeding tube placement will be assessed and documented: following initial placement, once per shift when NPO, before administration of PO medications, prior to each bolus feeds or every 4 hours with syringe changes for continuous feeds, and/or when there is risk or evidence of displacement.

Need to Know

Research has shown that gastric tubes can migrate internally while externally the tube looks secure. Ensuring the position of the NG/OG is critical to providing safe care.

No single method for NG/OG placement verification is reliable. Therefore, multiple methods must be used:

- Check tape is secure
- Ensure measurement is correct. (Refer to Cerner for documented depth.)
- Assess for signs of displacement
    - Increased bradycardia, oxygen desaturations, or apneas
    - Vomiting, coughing, excessive crying
- Check aspirate for colour and pH trend

The gastric tube must be:

- Labeled with date last changed
- Changed routinely every 72 hours.
- Pinched off during removal to avoid dripping fluid into the pharynx.
- Never be left unattended during a bolus feed.

Equipment and Supplies

1. #5 or #6 or #8 Fr. Gastric feeding tube
2. 3 to 5ml syringe for aspirating (a small syringe creates less pressure)
3. 10ml or 20ml syringe for feeding
4. Duoderm™ and Tegaderm™ dressing (cut to fit)
5. Clean, latex free disposable gloves
6. pH testing strip
7. Tape for labeling

Guideline

Assessment

Verify need for NG or OG (e.g. decompressions, enteral feeding)

Check the correct positioning of the gastric tube at each of the following times

- Following initial placement
- At least once a shift when NPO
- Before giving medication
- Prior to each bolus feeds
- Continuous feed, when changing syringe – every 4 hours.
- When there is a risk or evidence of displacement

Steps

To place Gastrointestinal Tube:

1. Wash Hands
2. Collect Equipment
3. Don non-sterile gloves
4. Cut and place Duoderm™ on cheek
5. Measure from the bridge of Nose-Ear-Mid-Umbilicus (NEMU) to determine the depth of insertion
6. Request help from a second nurse if needed to provide containment and comfort during procedure
    - Consider swaddling infant
7. Stabilize the head in the neutral or “sniffing” position with one hand, and use the other to insert the tube.
8. Gently insert the tube quickly (15 seconds or less) to avoid vagal response ; use lubrication if necessary
    - NEVER FORCE THE TUBE
    - Nasal insertion
        - Insert the tube in a vertical direction at right angles to the face
        - When changing the tube, alternate the tube position (i.e. use other nostril) to avoid skin irritation
9. Check placement

Check Gastrointestinal Tube Placement:

1. Gently aspirate to obtain 0.5 mL of gastric fluid using a small syringe.
    - If infant receiving a continuous feed, stop the feed for 10 to 15 minutes and then aspirate.
2. If unable to obtain aspirate, attempt the following and aspirate again:
    - Check tube depth landmark (cm) at nostril or lip
    - Inject 0.5 mL of air to dislodge the tube from the mucosa
    - Advance or retract tube 1 to 2 cm
    - Turn infant to the side
    - Seek assistance or advice from a peer, CNL, NE, or physician
    - Replace tube
3. Examine colour of aspirate:
    - Gastric
        - Clear or cloudy with a curdled appearance
        - Off-white (milky)
        - Grassy green, tan, bloody or brown
    - Esophagus
        - Little fluid (gastric/saliva)
    - Small bowel
        - Golden yellow or brownish green (stained with bile)
    - Respiratory
        - Off white and frothy (mucous stained)
4. Place 0.2 mL of aspirate on the pH strip.
    - Gastric aspirate pH 5.5 or less confirms tube placement in the stomach, WITH gastric coloured aspirate.
    - Gastric aspirate pH 5.5 or above, with gastric coloured aspirate, consider factors that may contribute to a higher pH. These include:
        - The presence of amniotic fluid in infants less than 48 hours of age
        - Medication used to reduce stomach acid. (e.g. ranitidine, omeprazole)
        - Dilution of gastric acid by enteral feeds.
        - Some infants will consistently have pH more than 6
        - If the above does not apply, seek advice from the healthcare team
    - Monitor trend of pH
5. Reinsert (re-feed) remaining aspirate back to infant via NG/OG tube
6. Secure feeding tube position.
    - First apply Duoderm™ directly onto the skin as a protective skin barrier, then
    - Secure the tube with Tegaderm™ onto the Duoderm™
    - Oral tubes are secured over the chin

- Nasal tubes are secured over the upper lip and/or cheek

7. Dispose of gloves, and wash hands

Documentation

The indwelling gastric tube is labeled with the date it was last changed.

The date, size, position length is recorded in Cerner under Gastrointestinal Tubes.

Patient and Family Education

Families should be educated on the purpose of the gastrointestinal tube, and signs and symptoms they should inform the nurse of related to feeding tube care.

Related Documents

- B-00-07-10029 - NICU: Enteral (Tube) Feeding

References

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First Released Date:	12-DEC-2011
Posted Date:	17-SEP -2020
Last Revised:	30-MAY-2015
Last Reviewed:	17-SEP -2020
Approved By:	PHC
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Owners:	PHC
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