Children's Hospitals and Clinics of Minnesota

Practice Update

The Center for Professional Development & Practice

NG Tube Verification of Placement

Evidence-Based Practice – July, 2014

Effective August 11th, NG tube placement will be verified by pH testing of gastric contents. Adverse events that occur from a misplaced tube can be aspiration, pneumonia and pneumothorax. Small bore NG tubes can also migrate out of position, knot, occlude or rupture. The goal is to standardize practice across all units, excluding infants less than 4 weeks post-term. This patient population is excluded at this time due to limited literature. Children's is behind other pediatric hospitals in implementing this practice, but research has shown that this is nearly a 100% reliable method.

Current practice:

- NG tube placement is initially verified by x-ray
- With all feedings and medications, ongoing verification is confirmed by auscultation

New practice:

- NG tube placement is initially verified by x-ray
- With all feedings and medications, ongoing verification will be confirmed by testing gastric contents with pH strips
- Hold feedings one hour prior to pH check
- Verify placement:
    - After initial tube insertion
    - Before each intermittent feeding
    - Before medication administration
    - Once a shift (or every 8 hours) with continuous feedings
    - Clear tube with 5mL of AIR before drawing back aspirate. Do NOT flush the tube with water due to gastric placement has not yet been confirmed and the water may affect the pH level.
    - If unable to obtain aspirate, place patient on left side and wait a few minutes. This may help the tube fall down into the stomach. Reattempt to obtain aspirate.

pH Finding	What it means
5 or less	• Can be correlated with correct placement in the stomach • Aspirate color (clear, light yellow, light green) will vary
Greater than 5	• May indicate intestinal or respiratory placement • Can at times, indicate stomach placement if the child is receiving acid suppression medications or continuous feedings.

- If unable to confirm placement after testing gastric aspirate, request order for abdominal x-ray.
- Radiological verification is recommended for those patients who are considered high risk (Cincinnati Children's Hospital, 2009): patients in pediatric and cardiac intensive care unit, patients with altered level of consciousness, and those patients with swallowing problems.

If you have questions about this process, contact your clinical educator or CES.

References:

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