Reflux, It Keeps Coming Up...but Should the Baby be Up?

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Intro/Cause:

- Gastro-Esophageal Reflux (GER/GERD) in preterm infants is common (25-75%), multifactorial and invasive to properly diagnose
- Primary cause is Transient Lower Esophageal Sphincter Relaxation (TLESR); additional factors include preemie anatomical characteristics, high volume liquid feedings, GI factors such as delayed gastric emptying, increased intra-abdominal pressure, and presence of feeding tube, medications (eg. caffeine)

Summary of Literature:

- **Causes:** GER is primarily related to TLESR and almost always outgrown
- **Symptoms/Diagnosis:** Not well-defined, no clear criteria and/or difficult to differentially diagnose
- **Relation to Respiratory Events (A,B,D's):** There is no evidence of causal or temporal relationship between reflux and apnea (however may be a reverse relationship)
- **Management:**
  - There is a lack of standard of care for management of GERD in prems
  - The relative risks, benefits and indications for GERD therapy (both pharmacological & non-pharmacological) are unclear in prems
- **Thickening:** rice cereal is effective in older infants but no evidence it works in prems (plus > risk of NEC)
- **Feeding Strategies**: Trans-pyloric, slowing rate of tube feeds or continuous feedings appear to have some effect on reducing GER(D)
- **Positioning:**
  - Left lateral and prone positions may decrease the incidence of reflux but risk of SIDS almost always outweighs these benefits
  - Post-feed prone positioning when supervised and awake may be helpful to alleviate acute discomfort
  - GERD is ≥ in infants positioned supine with head elevated than infants supine and flat

Thoughts on Positioning:

- Should we use Left Lateral followed then by Prone Positioning after feeds early in NICU stay, but transition to Supine prior to discharge to model "safe sleep" practices to parents?
- Head of bed elevation is so ingrained in NICU practice and thus may be difficult to challenge, but the lack of evidence necessitates ongoing discussion.
- In NICU there is an environmental or institutional tendency for infants to be in bed
- Do any circumstances exist in which sleeping on a wedge would be beneficial?
- Suggestion: Any consideration for wedge should be assessed case by case with that infant trialed on equal periods with and without HOB elevated and objective documentation to support its efficacy

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