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NG Tube Placement Methods: An EBP Review

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NG Tube Placement Methods: An EBP Review

Amanda Salerno & Kim Robinson

What We Learned

Research has shown confirmation of nasogastric (NG) tube by pH is the most reliable method to use at the bedside. X-ray verification is the “gold standard” if pH method alone is insufficient (e.g pH > 5.5). The auscultatory method was found to be unreliable and outdated practice.

Background

- Placement of NG tubes is a common nursing responsibility
- There are currently 3 common methods for verification of correct NG tube placement: pH testing of aspirate, X-ray, auscultatory.

Purpose & Aims

- Current research on this topic aims to determine which method of verification is superior and should be implemented into nursing practice.
- As healthcare providers, our patients’ health and best interests are always the top priority. Therefore, determining the most accurate method to verify placement is a matter of great importance to the nursing profession.

Sample

- Study 1: 44 adult (18+) patients with NG tubes
- Study 2: 276 children (24 weeks gestation- 17 years of age) with NG tubes
- Study 3: 178 adult (18+) patients with NG tubes
- Study 4: Nurses in 935 bed acute care tertiary hospital caring for patients with NG tubes

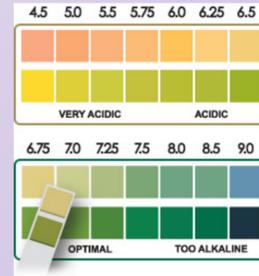
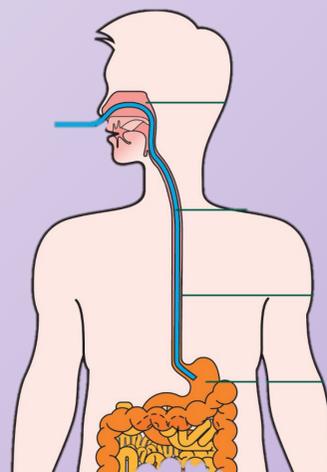
Methods

- CINAHL complete database was used to obtain articles published from 2009-2015. Search terms: nasogastric tube, intubation, tube placement, pH, auscultation. Articles collected 2/4/15-2/20/15.

Results



- There is no evidence to support using auscultation to listen for “whooshing” sound as placement verification.



- pH of aspirate is an accurate method of confirmation to be used at the bedside
- pH must be < 5.5 to be considered accurate with no further confirmation (x-ray)



- X-ray is considered the “gold standard” for placement verification
- However, it shouldn’t be used with every placement due to exposure to radiation
- This method should be reserved for when pH alone is not reliable (e.g > 5.5)

Discussion

- Based on the review of literature it can be concluded that confirmation by pH is the most accurate confirmation of NG tube placement at the bedside.
- The following conclusions can be drawn: implementing verification by pH is the most accurate method and implementing this change in practice will take time.

Recommendations

- In one study incorporating the use of pH confirmation as the standard protocol initially yielded high compliance rates. After the policy change was in place for several months compliance rates decreased.
- Further research should focus on how to effectively implement a practice change, ensuring compliance will remain high

Limitations

- This literature review only focused on four research studies, only a small portion of the research conducted in this area.

Acknowledgments

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