CHALLENGES OF TUBE PLACEMENT CONFIRMATION: pH

Nasoenteric feeding tube placements may be associated with adverse events.[1]

- Need for proper training to prevent devastating complications and significant patient harm related to misplacement.[1]

Safe tube placement and placement verification techniques are of primary importance.[1]

- Feeding tube placement must be followed by tube tip verification prior to the commencement of enteral nutrition.[1]

Techniques include—

- X-ray[1]
- pH[1]
- Capnography[1]
- Electromagnetic placement device (EMPD)[1]
- Interventional radiology[1]
- Ultrasound[1]
- Fluoroscopy[1]
- Direct visualization (use of endoscopy or camera technology)[1]

However, each of these techniques has its own drawbacks.[1]

Challenges of using pH testing technique for feeding tube placement confirmation

- Individual performing the test cannot be color-blind.[1]
- Need for periodic quality control testing and annual competency to fulfill point-of-care testing requirements.[1]
- Can be false negative if the tube is in the lungs and patient has aspirated gastric fluid.[1]
- Drop in total caloric delivery if feeding needs to be held to check pH.[1]
- Cannot be used to confirm post pyloric tube placement.[1]

Did you know ?

- One study reported being unable to obtain an aspirate in 69% of their patients. In another study, ~33.5% of aspirates were obtained only after additional measures such as air insufflation into the nasogastric tube, lateral positioning of the patient, and reattempting after an hour which resulted in delayed feeding.[2]
- Certain factors like continuous feeding and pH lowering medications would likely interfere with the pH of the gastric aspirates.[2]
- There is a possibility of false negative results in certain patient populations. Nasogastric aspirate of a patient with right tonsillar squamous cell carcinoma showed a pH of 4.5 despite the tube being in the chest.[2]

Benefits of using electromagnetic (EM)-guided placement technique for feeding tube placement

- Visual tracking of the tube pathway.[1]
- Helps avoid lung placement and complications.[1]
- Placement at bedside enabling expedited placement.[1]
- Nurses or dietitians can be trained to use the technique.[1]
- Better accuracy compared to X-ray.[1]
- Decreased radiation exposure.[1]
- Cost savings associated with reduced X-ray usage.[1,3,4]
- Allows for gastric and post pyloric tube placement.[1,5]
- Provides increased efficiency for small bowel tube placement.[1]

Reduced time to feed[1]

Feeding tube insertion using EM-guided placement technique requires focused training until confirmation of necessary skills.[4]

Our Solution

Feed patients faster, so they recover faster.[6]

An electromagnetic stylet provides real-time location information on the tube tip placement within a patient's anatomy.[6] » On-screen visualization provides immediate feedback on tube placement.[6]

Efficient placement[6]
- Visualization at bedside.
- Direct tubes to desired feeding placement with real-time feedback.
- Immediately identify misplaced tubes.
- Minimize complications, such as lung placements.

Timely feeding[6]
- Can significantly reduce time-to-feed.
- More efficient than blind placements with X-ray confirmation.

Reduced burden[6]
- Address feeding needs more quickly.
- Can improve patient outcomes.
- Save time and resources.

Allows clinicians to confidently place tubes in an optimal feeding position, quickly confirm location, and reduce the time to nutrition delivery.[6]

Institution protocols must always supersede the use of the CORTRAK®2. Clinical judgment must always take precedence.[1]

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