Line It Up – Inadvertent Placement of Nasogastric Tube in Pleural Space Resulting in Iatrogenic Empyema

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Abstract

Dobhoff tubes, used for post-pyloric feedings, have a weighted metal end with a small diameter that enhances their flexibility to traverse the gastrointestinal tract. Unfortunately, the metal stylet can iatrogenically perforate surrounding structures in patients with diminished cough and gag (1); and extreme caution should be considered before its utilization.

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Key Clinical Message/Abstract:

Dobhoff tubes, used for post-pyloric feedings, have a weighted metal end with a small diameter that enhances their flexibility to traverse the gastrointestinal tract. Unfortunately, the metal stylet can iatrogenically perforate surrounding structures in patients with diminished cough and gag (1); and extreme caution should be considered before its utilization.

Key Words: *Nasogastric tube; feeding tube; malposition; perforation*

Case History:

Post-pyloric feedings are an essential strategy in critically ill patients to facilitate tube feed delivery and mitigate aspiration events. As with other feeding modes, Dobhoff tubes also require a clinical and radiologic confirmation for proper placement.

Question: What are the implications of incorrect Dobhoff tube placement?

Answer: Dobhoff tubes can easily perforate vital surrounding structures and placement should be confirmed.

A 66-year-old male with several comorbidities presented with altered mental status and septic shock requiring a prolonged stay in the intensive care unit. A nasogastric tube was placed and confirmed via visual observation on consecutive abdominal radiographs (Figure 1, Figure 2); tube feeding was subsequently initiated. Within a few hours, the patient began experiencing desaturation episodes with an emergent computed tomography (CT) of the chest and abdomen (Figure 3, Figure 4), revealing a new left hydropneumothorax and pleural effusion from iatrogenic puncture of pleura. Tube feedings were stopped and a chest tube was placed immediately with drainage and eventual seal.

Author Contributions:

Murtaza S. Hussain - Acquisition, draft, and review

Smit S. Deliwala - Conception, draft, and review

Dominic Awuah - Acquisition and review

Rohit Gupta - Acquisition and review

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