Should Simple And Common Procedures Be Taken Lightly?: Nasobronchial Feeding: A Case Report

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Citation


Abstract

Adult respiratory distress syndrome is a severe form of hypoxemic respiratory failure. It is associated with a number of clinical situations. Aspiration of gastric contents is one of them causes acute lung injury. Vomiting or regurgitation is the usual mechanism responsible for it. I report a case in which patient was fed with nasogastric tube placed in the tracheobronchial tree.

INTRODUCTION

Nasogastric tube, in addition to its other functions, is used to feed the patient that cannot take food by the mouth. Its proper placement in the stomach should be checked before starting feed. Failure to recognize its proper placement can result in life threatening situation i.e., food can damage the breathing system resulting in ARDS.

CASE REPORT

A 69 years old male patient known case of Diabetes Mellitus, Hypertension, Chronic Renal Failure and operated Abdominal Aortic Aneurysm was fed with an unknown quantity (of NovasourceTM renal: NOVARTIS) through nasogastric tube placed in the tracheobronchial tree. Soon after feeding patient developed respiratory distress and an immediate x-ray chest showed nasogastric tube placed into the left bronchus as shown in figure 1.

Figure 1

Figure 1: X-ray chest showing nasogastric tube placed in the left bronchus.

Later the patient was transferred to Surgical Intensive Care Unit where Mechanical ventilation was initiated. X-ray chest was done in ICU showing full-blown picture of ARDS as shown in figure 2.
Figure 2
Figure 2: X-ray chest showing bilateral pulmonary infiltrates more on the left side.

DISCUSSION

Adult respiratory distress syndrome is characterized by abnormal permeability of pulmonary capillary endothelium, leading to leakage of fluid containing high concentration of proteins into the pulmonary parenchyma and alveoli, producing a clinical picture similar to ARDS. Arterial hypoxemia is the most consistent manifestation of aspiration pneumonitis. Despite improvements in supportive therapy the mortality rate associated with ARDS over the last 25 years remains unchanged at 60-70 %.

Nasogastric tube insertion is a common procedure performed in the practice of medicine. Its proper placement is as necessary as endotracheal tube. One should follow the bedside simple tests and imaging studies before starting nasogastric feeding. Common sense and science should be applied.

a- Aspiration of gastric contents through nasogastric tube confirms its proper placement. Problem can arise when stomach in empty or tube in coiled in side the stomach.

b- Inflation test should be performed carefully because sound waves can be transmitted to the epigastric area particularly when nasogastric is placed in left bronchus.

c- Dip test is done by putting the proximal free end of nasogastric tube in the water. Absence of bubble formation in expiratory phase confirms the tube in stomach. Expiratory sounds can be heard at ears without using water. Bubbles can be seen in case of severe Bronchospasm when patient is using accessory muscles particularly the abdominal muscles.

d- End tidal CO2 monitor can be used to distinguish presence of nasogastric tube in esophagus or trachea.

e- X-ray chest particularly lateral view can show presence of nasogastric tube in esophagus or trachea.

f- Fluoroscopy can be used to pass nasogastric tube in the gastrointestinal tract.

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