

Intracranial placement of a nasogastric tube in a non-trauma patient

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Inadvertent placement of a nasogastric tube within the intracranial compartment is a serious potential complication that was seldom reported in non-trauma patient.

An 80-year-old male with a history of arterial hypertension presented to our emergency department for cerebral hemorrhage. After craniotomy and evacuation of intracranial hemorrhage he was admitted in the intensive care unit and extubated after 48 hours. A feeding tube (Flexiflo 10 Fr, 114 cm; Abbott, Chicago, USA) with a wire stylet was inserted through the right nostril, after adequate lubrication with the patient in a semi-sitting position. Mild coughing but no unusual resistance was encountered. No bubbling sounds were auscultated with endoscope over the epigastrium after insufflation of 30 ml of air and no fluid was aspirated from the tube. Malposition was suspected and no enteral feeding initiated. A chest x-ray showed that the nasogastric tube followed the esophagus and reverted to the right nasal fossa. A computed tomography scan showed the nasogastric extremity in the right frontal sinus (Figure 1). The nasogastric tube probably entered into the frontal sinus through the middle meato, the ethmoidal infundibulum passing through the

semilunar hiatus and the frontonasal duct. We removed the nasogastric tube and the patient did not develop any complication.

To the best of our knowledge this is the first description of malposition of a nasogastric tube in a frontal sinus in a non-trauma patient. Inappropriate intubation of the tracheopulmonary system is the most common misplacement site for nasogastric tube and is reported in about 2% of placement attempts with possible misplacement in the pleural cavity. Malpositioning in the peritoneal cavity or the mediastinum through gastric, esophageal or intestinal perforations is another possibility.

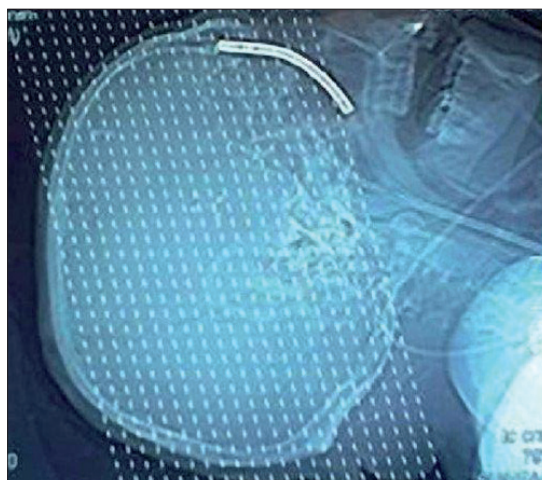


Figure 1 - Computed tomography scan showing the nasogastric tube extremity in the right frontal sinus.

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