

Project to Collect Medical Near-Miss/
Adverse Event Information

Medical Safety Information

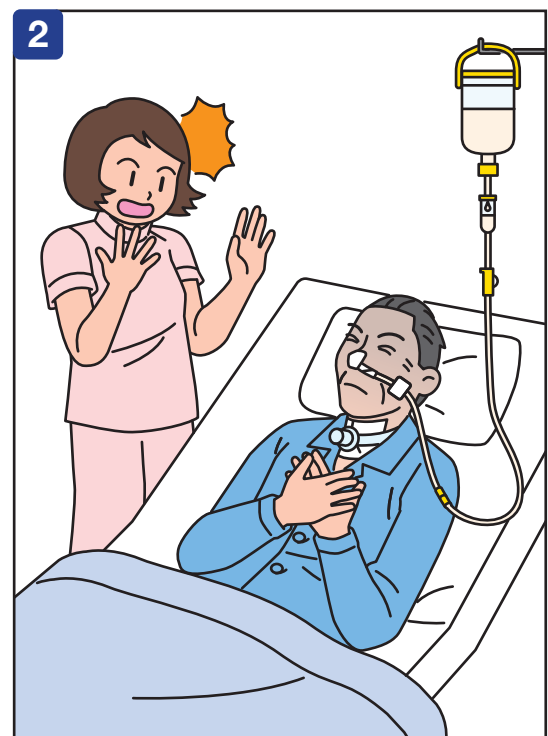
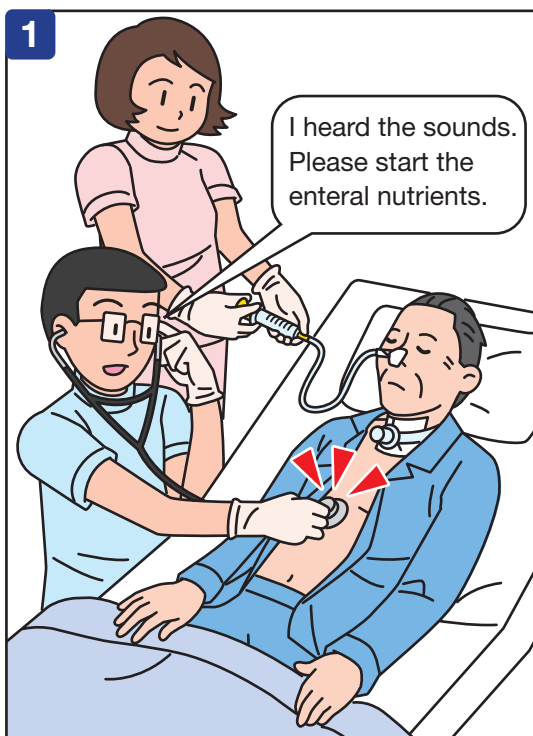
Wrongly Inserted Nasogastric Feeding Tube

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Eleven cases have been reported in which a nasogastric feeding tube was inserted into the airway in error, but was judged to have entered the stomach based solely on listening for bubbling sounds (Whoosh test) and, as a consequence, enteral nutrients or oral medication were injected into it (information collection period: from January 1, 2013 to October 31, 2016). The information is compiled based on “Individual Theme Review” (p.147) in the 43rd Quarterly Report.

Cases have been reported in which, after inserting the nasogastric feeding tube, the Whoosh test formed the sole basis of the judgment that the tube had entered the stomach, but the tube had actually been inserted into the airway in error. In all cases, enteral nutrients or oral medication were injected into the wrongly inserted tube and affected the patient’s respiratory condition.

Image of case 1



Wrongly Inserted Nasogastric Feeding Tube

Case 1

After inserting a nasogastric feeding tube into a patient with a tracheostomy, the physician listened for bubbling sounds (the Whoosh test) and judged that the tube had entered the stomach. When the nurse subsequently began to inject the enteral nutrients, the patient suffered a coughing fit and complained of respiratory discomfort. The physician performed a bronchoscopy via the tracheostomy and found that the nasogastric feeding tube had been inserted into the trachea.

Case 2

After inserting a nasogastric feeding tube, the nurse was unable to suction the patient's stomach contents, but listened for bubbling sounds (the Whoosh test) with another nurse and judged that the tube had entered the stomach. Before injecting oral medication, the nurse again carried out the Whoosh test with another nurse. When the nurse injected boiled water in which the oral medication had been dissolved, the patient began to cough and their SpO₂ fell to around 80%. A chest X-ray was performed and the nasogastric feeding tube was found to have been inserted into the right bronchus.

Preventive measures taken at the medical institutions in which the events occurred

- After inserting a nasogastric feeding tube, staff will suction stomach contents to check that the tube has entered the stomach. If the stomach contents cannot be suctioned, X-ray imaging will be used to confirm the position of the tip of the tube.

Complementary comment by the Comprehensive Evaluation Panel

- When used on its own, the Whoosh test is not a reliable method for checking whether or not a nasogastric feeding tube has been inserted into the stomach.
- Decide on a procedure for checking that a nasogastric feeding tube has entered the stomach after insertion and comply with this procedure.

* As part of the Project to Collect Medical Near-Miss/Adverse Event Information (a Ministry of Health, Labour and Welfare grant project), this medical safety information was prepared based on the cases collected in the Project as well as on opinions of the "Comprehensive Evaluation Panel" to prevent the occurrence and recurrence of medical adverse events. See quarterly reports and annual reports posted on the Japan Council for Quality Health Care website for details of the Project.

<http://www.med-safe.jp/>

* Accuracy of information was ensured at the time of preparation but cannot be guaranteed in the future.

* This information is intended neither to limit the discretion of healthcare providers nor to impose certain obligations or responsibilities on them.



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