NSW HEALTH

Safety Notice 007/09

27 March 2009

Nasogastric Feeding Tubes for Infants and Children

Reducing the incidence of Misplacement associated with administration.

Distributed to:

- Chief Executives
- Directors of Clinical Governance
- Directors of Clinical Operations

Action required by:

- Directors of Clinical Governance

We recommend you also inform:

- Directors of Emergency Medicine
- Directors of Medical Services
- Directors of Ambulance Services
- Directors of Intensive Care
- Directors of Nursing and Midwifery
- Medical staff
- Nurses
- Dietitian/Nutritionist

Expert Reference groups

Content reviewed by:

- Children's Hospital at Westmead
- Nursing and Midwifery Office

Quality and Safety Branch

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Website: http://www.health.nsw.gov.au/quality/sabs/index.html

Background

Nasogastric tubes (NGTs) are used extensively in neonatal units. Although it is usually a very safe procedure, there is a small risk that the tube can be incorrectly placed into the lungs during insertion, or move out of the stomach at a later stage, increasing the risk of milk or medication being instilled or aspirated into the lungs. Studies have shown that testing methods to check the placement of nasogastric feeding tubes in adults and children can be inaccurate.

NSW Health has recently been notified of an incident where a NGT was incorrectly placed in a child admitted for investigation of a seizure and possible aspiration. Numerous attempts at placing the tube were undertaken in both the Emergency Department and ward. The child received a number of medications via the NGT. A chest X-ray identified the NGT was incorrectly placed into the Right Main Bronchus.

Procedure for correct insertion of the Feeding Tube

Standard precautions and single patient use practice applies, therefore equipment must be discarded after every use, unless otherwise indicated. It is important to lubricate the NGT with water prior to insertion. Some NGTs (e.g. polyurethane tubes) require an injection of 2mls of sterile water into the tube to ensure the guidewire can be removed after insertion.

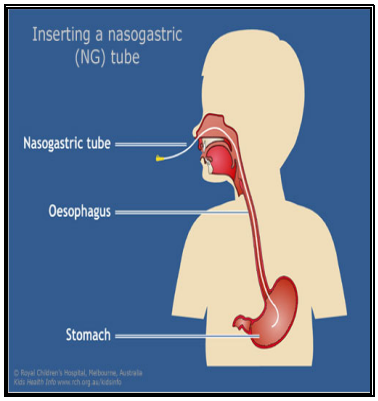
Determining Correct NG Tube Position

The colour and pH of aspirate from the NGT can assist in determining position. A pH of less than or equal to 5 indicates probable gastric placement[1] (if in small intestine it is considered misplaced in neonates). If unable to aspirate:

1. Inject 1-5mls of air into the tube, wait for 15-30 minutes
2. Try aspirating again
3. If still unable to aspirate, advance tube and attempt to aspirate.
4. X-ray the patient if aspiration is problematical or you are concerned, if the patient has a depressed level of consciousness, bulbar palsy, or insertion has been attempted multiple times.

When to check the tube position:

- Following initial insertion
- Before administering each feed
- Before giving medication
- Following vomiting, retching or coughing. Note, the absence of coughing does not rule out misplacement or migration
- If there is evidence of tube displacement. For example, if the tape is loose or the visible tube appears longer or kinked
- If the patient is on continuous feeds, tube checking should be synchronised with the feed changes. Wait 15 to 30 minutes to allow the stomach to empty of milk or medication and the pH level to fall.



References

1 Metheny, N.A & Titler, M.G. (2001) Assessing Placement of Feeding Tubes. American Journal Nursing, 101:5,36-44

Picture from: http://docs.ksu.edu.sa/DOC/Articles07/Article070736.doc

Suggested Actions by Area Health Services

1. Ensure that this safety notice is distributed to all clinical staff involved in the administration of nasogastric tubes.
2. Ensure staff members new to areas administering nasogastric tubes are made aware of the risks and correct procedures associated with administration of nasogastric tubes.
3. Please ensure staff are aware that further information is available via the CIAP website at: http://www.ciap.health.nsw.gov.au/ or http://internal.health.nsw.gov.au:2001/