Nasogastric tubes 1: insertion technique and confirming the correct position

Indications for nasogastric tube insertion, the procedure for inserting a nasogastric tube and how to check whether it is in the correct position

INDICATIONS
There are only two main indications for NG tube insertion – to empty the upper gastrointestinal tract or for feeding. Insertion may be for prophylactic or therapeutic reasons. Care should be taken in cases where there may be:
- Ear, nose and throat abnormalities or infections;
- Possible strictures of the oesophagus;
- Oesophageal varices;
- Anatomical abnormalities (oesophageal diverticulae);
- Risk of aspiration.

GAINING CONSENT
Practitioners should give patients a reassuring, detailed explanation of the insertion procedure, together with the reasons why the tube is necessary. Verbal consent should then be obtained.

LEARNING OBJECTIVES
1. Know the correct technique for inserting nasogastric tubes.
2. Understand the principles for verifying the correct intragastric position of a tube.

SIZES
Nasogastric tubes come in various sizes (8, 10, 12, 14, 16 and 18 Fr). Stiff tubes are easier to insert, and putting them in a refrigerator or filling them with saline helps to stiffen them. Some fine-bore tubes come with a guide wire to aid placement. The tube has markings and a radio-opaque marker at the tip to check its position on X-ray.

PREPARATION
After washing hands, prepare a trolley including gloves, local anaesthetic jelly or spray, a 60ml syringe, pH strip, kidney tray, sticky tape and a bag to collect secretions. Placing a glass of drinking water nearby is useful.

INSERTION TECHNIQUE
Tubes are usually inserted by nurses or junior doctors by the bedside or by anaesthetists in theatre before or during surgery. External measurement from the tip of the

INTRODUCTION
A nasogastric (NG) tube is a long polyurethane or silicone tube that is passed through the nasal passages via the oesophagus into the stomach (Fig 1). They are commonly inserted in surgical practice for various reasons.

According to the National Patient Safety Agency (2005a), 11 deaths and one case of serious harm occurred due to misplaced nasogastric feeding tubes over a two-year period. It is therefore vital for staff inserting these tubes to know both the correct insertion methods and the procedure for verifying their correct intragastric positioning.

FIG 1. NASOGASTRIC TUBE

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This is the first in a two-part unit on nasogastric tube management. It discusses the indications, patient preparation, insertion technique and various methods of confirming the tube’s position. According to the National Patient Safety Agency, 11 deaths and one case of serious harm occurred due to misplaced nasogastric feeding tubes over a two-year period. It is therefore vital for staff inserting these tubes to know both the correct insertion methods and the procedure for verifying their correct intragastric positioning.

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