
GUIDELINES FOR MANAGING OCCLUDED ENTERAL FEEDING TUBES

These guidelines were developed from the nursing research project entitled “Maintaining and Restoring Patency in Enteral Feeding Tubes”, presented as a Master of Nursing Science Thesis, The University of Adelaide, 2000 by Annie Albrecht.

In terms of overall patency restoration rates in occluded enteral feeding tubes, this research revealed:

- *40% patency restoration in occluded transnasally placed feeding tubes (NGT / NDT / NJT)*
 - *100% patency restoration in occluded surgical jejunostomy (t-tube) feeding tubes*
-

1. **Check the Feeding Tube Position**

The position of the feeding tube must not be in question. Do not proceed unless tube positioning is rechecked according to current procedures. The instillation of water and the activated pancreatic enzyme solution into a feeding tube malpositioned in the lungs can cause respiratory difficulty and lung damage.

2. **Wear goggles to protect against potential eye splash. Instruct patient to close their eyes.**
3. For gastrostomy and jejunostomy tubes **remove the securing dressing at the insertion site.**
4. Inspect the insertion site and entire external length of the feeding tube to exclude kinking or constriction by securing skin sutures.
5. **Disconnect any removable feeding tube adaptors from the end of the feeding tube** (eg Y port adaptor from T-tube Jejunostomy and primary PEG tubes).
6. Attempt a warm water flush using a 50 ml syringe connected directly to the end of the tube. **DO NOT USE SMALLER THAN A 50ml SYRINGE** as pressures created by smaller calibre syringes may rupture the feeding tube.
7. If the tube remains occluded the following is recommended as a **first line intervention**:

Tube Manipulation & Water Irrigation Procedure:

8. As applicable to tube type, ensure insertion site dressing is removed to allow access to external length of tube and that any removable feeding tube adaptors are disconnected from the end of tube end to allow direct access to feeding tube.
9. With the tube capping mechanism open, or any separate feeding tube adaptor removed from the tube, manually palpate the external length of the feeding tube along its entire course. Area(s) of occlusion within the feeding tube can often be felt as hard inflexible section(s) within the tube lumen and occluding material can often be manually manipulated along the tube length and expressed out the end of the tube (often called “milking or stripping”).
 - Stabilize the tube at the insertion site with one hand, squeeze and rub the tube between the index finger and thumb of the other hand, starting at the insertion site and working all the way back towards the open end of the tube. This will enable occluding material in the external portion of the tube to be moved along and expressed out the tube end. It may be necessary to repeat this several times to express all the occluding material.
10. Aspirate feeding tube with 50 ml syringe connected directly to the tube to remove as much liquid as possible from within the tube lumen proximal to the occlusion. Following this, attempt tube irrigation, with warm water in a 50ml syringe by instilling and aspirating sequentially, (using a back and forth motion), to remove particles of coagulated feeding formula from the tube. Repeat the irrigation attempts with clean warm water in a 50ml syringe, then reattempt flushing of tube with warm water in a 50ml syringe.
11. The above procedure has a success rate of 38% (Albrecht, 2000, p126). If the tube remains occluded, the following procedure is recommended as a **second line intervention**.

GUIDELINES FOR MANAGING OCCLUDED ENTERAL FEEDING TUBES

***Note:** If there is little or no movement within the tube on flushing attempts following the previous tube manipulation and irrigation procedure, then the likelihood of restoring patency is limited. At least 2ml solution instillation is required.*

Activated Pancreatic Enzyme Solution Instillation Procedure:

12. Obtain a prescription for:
 - Pancreatic Extract 10,000 IU (Creon 150mg) and Sodium Bicarbonate 840 mg.
13. In addition to checking for allergies to the drug constituents and to pork products (Pancreatic Extract is a porcine derivative), which represent contraindications; checks should also be made with the patient in relation to lifestyle (vegetarian) or religious (Muslim) issues which may influence use of this solution.
14. **Preparation of Solution:** Open and empty out the contents of one Pancreatic Extract 10,000 IU (Creon 150mg) capsule and finely crush the granular contents in a pestle and mortar. Open and empty the powder contents of one 840 mg Sodium Bicarbonate capsule. Combine the powdered drug constituents in a pill cup and add 5 ml of warm water, vigorously mixing and stirring with the hub of a 50ml syringe to break up any clumps. This will take 2-3 minutes and can be facilitated by drawing the solution up into the syringe, shaking it and then squirting it back into the pill cup for further mixing. When the solution is mixed, and no clumps or sediment remain, draw up in the 50ml syringe.
15. Attach the 50 ml syringe containing the solution directly to the feeding tube (no adaptors) and holding the connection point firmly together to prevent leakage, instil the 5 ml solution (or as much as possible) into the tube. Have a second person clamp the tube with Spencer Wells Forceps below the syringe / tube connection to hold the solution within the tube. Leave the tube clamped and the 50ml instillation syringe connected to the tube for 45 – 60 minutes.
16. Release the Spencer Wells clamp on the tube. If the instilled solution refluxes / returns into syringe, attempt reinstallation of the solution using a fluxing (in / out) motion. Most often the occlusion will be readily resolved, in which case follow with a 60ml warm water flush. However, if occlusion persists, reinsert solution and reclamp tube for a further 45 – 60 minutes, then reattempt solution instillation followed by a 60ml warm water flush.
17. **Recommend assessment of circumstances and identification of risk factors associated with the occlusion episode and implement strategies to minimise / prevent further occlusions.**
 - Ensure the enteral feeding tube is flushed with water (preferably warm, recommend 60ml):
 - prior to commencing each feed and on completion of each feed
 - on changing the flask in continuous feeding regimens
 - any time the feeding delivery is interrupted, even if temporarily
 - before and after medication administration via the tube, (use 20ml between medications)
 - Administer medications in liquid or dispersible form. Recommend:
 - dispersible drugs be mixed in 30ml water, some require a standing time prior to administration (refer to pharmacy)
 - further dilution of liquid drugs (eg with 20-30ml water) to thin and reduce osmolality.

For clinical advice: Contact Annie Albrecht CNC R6, 82224567 / extension 24567.