Adult Gastrostomy and Jejunostomy feeding tube management

Contents

Policy/Purpose

To ensure safe management of the gastrostomy/jejunostomy in the hospital environment

- The patient's condition must be assessed in the immediate post insertion period
- Optimum wound healing must be promoted
- Potential complications must be minimised
- Discharge planning and education of patient/caregiver occurs.

Scope

General scope

Dietitians

Medical Officers (ordering insertion)

Pharmacists (medication advice)

Nursing Scope

Stoma/exit care cleaning and Enteral feeding, emergency insertion after dislodgement scope

Registered or Enrolled Nurse

Nursing Student under the supervision of a Registered Nurse

For urgent assistance for dislodgment contact the Gastroenterlogy unit afterhours, phone the telephonist for the Gastro nurse on call or use the below contact during normal working hours.

Routine replacements of tube scope

Enteral Nutrition Clinical Nurse Specialist – 0273512474 – during normal working hours

Credentialed Registered Nurses/Enrolled Nurses.

Cystic fibrosis CNS

Associated documents

- Percutaneous Endoscopic (PEG) Tube Nursing information and instructions for ongoing care C270052
- Percutaneous Endoscopic Transgastric Jejunal Tube Insertion C270053
- CDHB Enteral Feeding Policy

- Guideline for feeding post gastrostomy insertion G/Div/FS/common/Paediatrics/Gastrosotmy feeding guideline

Indications for use

- Patients who are unable to meet nutritional needs long term via the oral route
- Patients unable to safely swallow sufficient food and fluid to meet nutritional needs long term
- Patients requiring nutrition support following head or neck surgery
- Patient nutrition pre head/neck or thoracic-chest radiation
- Patient requiring gastric decompression

Definitions

Percutaneous Endoscopic Gastrostomy or (PEG): a tube is placed into the stomach through the abdominal wall to the outside of the body under the visual guidance of an endoscope (a lighted instrument which passes through the oesophagus into the stomach).

This tube extends **12-15 inches** from the skin with a cap or plug on the end of it. To keep the tube in place a short cross piece of tubing or bolster is placed near the skin level at the stoma (the tract from outside skin to the stomach).

RIG (Radiologically inserted gastrostomy): for patients not able to undergo endoscopic placement.

Percutaneous Endoscopic Gastrojejunal or (PEGJ): a tube is placed into the stomach through the abdominal wall to the outside of the body under the visual guidance of an endoscope (a lighted instrument which passes through the oesophagus into the stomach).

A jejunal tube is then inserted through the PEG tube and advanced via the stomach into the jejunum preferably past the ligament of Treitz.

Surgical Jejunostomy:a tube is inserted surgically into the small bowel past the ligament of Treitz.

Pre procedure requirements

The SMO/RMO will refer the patient to the Gastroenterology Department, Christchurch Hospital on Extension 88745 so that the

Enteral Nutrition Nurse Specialist can discuss the procedure with the patient and next of kin prior to the insertion of PEG/PEGJ/RIG/JJ

Cystic fibrosis patients have their own gastrostomy clinical pathway for pre and post procedure – please contact the CF CNS for guidance

Nursing staff must ensure the patient is NBM/nil by feeding tube for six hours prior to procedure

If insulin dependent diabetic, ensure glucose/insulin infusion has been commenced as per protocol

If the patient is on anticoagulants, particularly Warfarin, liaise with the Gastro Dept

Medical staff are to order anticoagulant studies to ensure the patients INR is within acceptable range (below 1.2) on the day of the procedure

Ensure patent IV cannula is in situ

Ensure all relevant documents are in front flap of patient's notes:

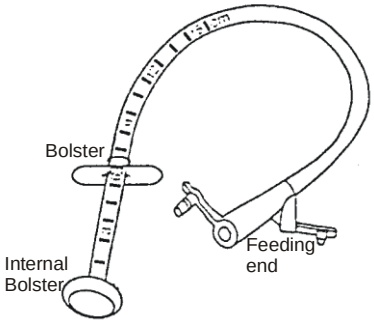
- Inpatient Check List (C270011)
- Fluid Balance Chart
- Medication Chart
- Oxygen and Infusions chart
- Consent Form QMR 002A

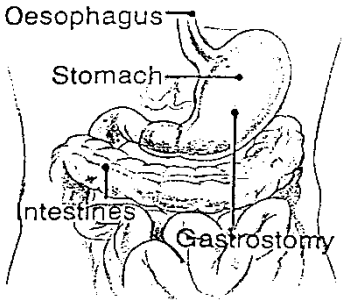
Ward staff are to liaise with nursing staff in Gastroenterology if there are any queries about preparation of patient or notable medical history

All paediatric patients require referral to Paediatric Surgeons as per CDHB Enteral Feeding policy

PEG Tube diagrams

Gastrostomy tube





Gastro-Jejunostomy tube

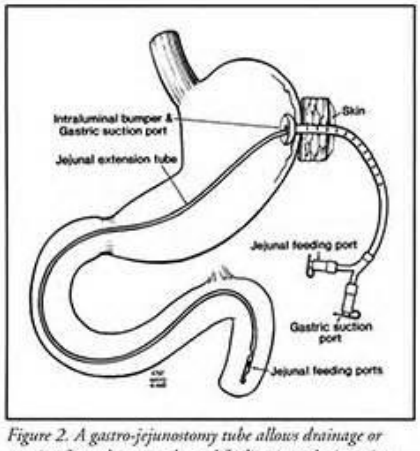


Figure 2. A gastro-jejunostomy tube allows drainage or venting from the stomach, and feeding into the intestine. ©2000, Mayo.

Post Care Procedure

Observations

- Baseline - Full set of observations to inform a EWS
- Post Procedure Full set of observations to inform a EWS then as per EWS protocol. Check IV sites and manage IV infusions as prescribed, and document on Fluid Balance Chart as indicated.

Tube management and use

- The patient must be assessed by a Dietitian.

- PEG/RIG- Do not use tube for the first 4 hours, to allow time for the stoma tract to heal, then give a sterile water bolus of 50mL through tube.
- PEG - At 5 hours administer another 50 mL sterile water bolus and at 6 hours feed as per dietitians instructions.
- PEGJ/Surgical Jejunostomy – Feeding may commence via the jejunal extension as indicated by the surgeon/endoscopist.
- **DO NOT** aspirate or rotate the jejunal tube.
- Keep patient at 30 - 45 degrees upright during gastric feeding and for one hour post feeding.
- Paediatrics refer to the Guideline for feeding post gastrostomy insertion G/Div/FS/common/Paediatrics/Gastrosotmy feeding guideline

Insertion site management and cleaning

- Check insertion site on return to ward, then 4 hourly. Remove the dressing the next day.
- For PEGs rotate the tube 360 degrees after 24hrs and then daily (**do not rotate PEGJ tubes**)
- Inflammation and/or swelling may be present initially, but should settle within 24 hours.
- Observe for signs and symptoms of peritonitis i.e. abdominal distension/tenderness, chills, fever, vomiting. Document episodes of nausea, vomiting, constipation or diarrhoea.
- Clean the site using gauze soaked saline and dry thoroughly
- Avoid placing a gauze dressing under the disc/flange as this creates a warm moist environment for bacterial contamination
- Assess the location of the disc/flange daily. It should sit at 1-2mm from the skin. Reposition if required as if too “firm” against the skin can cause a pressure necrosis and a too loose disc/flange can cause leakage of gastric content or lead to tube migration
- Report to medical staff if concerned about the amount of ooze and/or oedema present – see Complication Notification section
- Assess and document patient’s level of pain and administer pain relief as prescribed. Note pain relief given in Gastroenterology Clinic. Site may remain tender for 1 – 2 weeks.
- The day after insertion the patient may have a shower ensuring the stoma site is cleaned and well dried.

- Paediatrics Daily - check placement of tube as per surgeon's markings on op note.
- Day 2 commence daily turning of PEG to ensure it stays free. Note it is not necessary to turn 360 degrees

  Important to ensure it is not too tight against the skin or too loose.
- Bathing – may commence the day post procedure

Lippincott procedure for tube and site management

Pre accessing checks

- Note the "cm" marking on the gastrostomy tube at skin level and the marking at the top of the disc/flange. This must be documented in the patient's Clinical Record.
- If there is a marked difference, do not feed and notify the Enteral Nutrition Nurse Specialistfor Paediatric patients notify the paediatric surgeons via the registrar.
- Sterile water must be used for flushing
- PEG/RIG - If the tube cannot be rotated easily or does not move slightly in and out of skin - **DO NOT USE** as the tube may be out of position
- PEGJ – Stop feeding if patient starts vomiting, as the jejunal extension may have migrated back into the stomach.
- Refer to Enteral feeding policy for guidance on administration of medicines and feeding
- RIG - Follow instructions from interventional radiology post procedure
- Surgical Jejunostomy - Refer to post procedure instructions in theatre notes for each individual patient. Do not rotate these tubes. They are sutured into the small bowel. Do not use syringes less than 20 mL

Direction for Complications and Notifications

Notify Medical staff/dietitian/Enteral Nutrition Nurse Specialist and in paediatrics notify the paediatric surgeons if any of these complications are observed.

- Raised temperature

- Redness, swelling, pain or leaking around tube, indicating signs of infection.
- Stomach distension/ hardness to touch, possibily indicating signs of peritonitis.
- Migration of the tube

Candidiasis

- A fungal rash can develop when skin is exposed to leakage around the tube. Patchy red macropapules with characteristic satellite lesions appear and the patient will complain of itching.
- Swab for confirmation.
- Treat with a prescribed topical anti-fungal powder/cream.
- Remove the cause of moisture and maintain a dry intact area around the tube.

Chemical Dermatitis

- This is the result of persistent leakage of gastric fluid, which is high in caustic enzymes.
- The skin will be red, moist and painful.
- Protect the surrounding skin with barrier wipes or barrier creams such as zinc,or even liquid Mylanta ™.
- If leakage is copious, may need to use highly absorbent dressings to maintain skin integrity.
- May need to review feeding method/regime. Contact the ward Dietitian.
- Medication such as omeprazole will reduce gastric acidity and the caustic effect of gastric contents on the skin.

Cellulitis

- Characterised by redness, erythema, intense pain, high white blood cell count and fever. If cellulitis is suspected, notify the medical officer.

Infection

- If the stoma site appears infected, a swab should be taken and the organism identified. If it is a continuing problem, it may be worth considering changing the tube to coincide with the antibiotics as the tube will be heavily contaminated.

Over Granulation

- The cause of over granulation is unknown. It occurs when there is an extended inflammatory response. Granulation tissue becomes proud at the wound and epithelial tissue is unable to migrate across the surface. An over granulated site may be constantly wet, bleeds easily on contact and is prone to infection. Keep the stoma site clean and dry.

Preventative measures:

- Stabilise the tube to restrict movement
- Keep the stoma site clean and dry.
- Ensure the external flange isn't too loose allowing for excessive movement in the stoma tract.

Treatment

- Apply a topical corticosteroid ointment such as pimafucort BD for 5 days.
- If no response, the area may need to be cauterized with silver nitrate 2-3 times per week until the tissue has completely sloughed.
- The surrounding skin should be protected with white soft paraffin or gauze prior to applying silver nitrate.

Pressure Necrosis

- Pressure necrosis has been described as ischaemic or ulceration of tissue at the tube-feeding site.
- Bleeding, leakage or tube obstruction can signal a problem.
- To minimise the risk of pressure necrosis, ensure there is a 1-2 mm space between the external bumper and the abdominal skin surface.
- It is important also to adjust a disc after weight gain.
- Evaluate disc position with the patient sitting up to ensure the outer retention device is not causing deep indentation in the skin.

"Buried Bumper" syndrome (BBS) – PEG only

- BBS is the external migration of the internal bumper from the gastric lumen becoming lodged in the gastric wall or anywhere along the gastrostomy tract.

Contributing factors

- Excessive traction on the feeding tube.
- Inadequate manipulation (daily roatation of tube and ensuring “in and out” play)
- Retention device too tight.

Signs/Symptoms

- Leakage round the PEG tube
- Inability to feed through the PEG tube including leakage at the time of infusion.
- Inability to rotate or move the tube in and out of the stoma
- Pain, swelling and local infection.

Notify the medical team if the patient presents with the above symptoms.

Haemorrhage

- Bleeding at the PEG/RIG insertion site is rare as only a small incision is made during the procedure
- If the patient presents with haematemasis, malaena and/ or presence of fresh blood in the gastrostomy tube the medical team should be informed immediately.

Tube Migration

- The stoma length must be documented in the patient’s notes at time of PEG/RIG tube placement.Paediatric surgeons to record on the operation notes.See Guideline for feeding post gastrostomy insertion G/Div/FS/common/Paediatrics/Gastrosotmy feeding guideline
- The stoma length is the centimetres marking on the gastrostomy tube at skin level.
- The centimetres marking at the top of the flange must also be documented which is an easier identifiable mark, particularly for patients.
- Correct tube position should be checked prior to commencement of feeding.

Tube Migration Inwards

- This may cause partial pyloric or oesophageal obstruction accompanied by nausea, vomiting and abdominal distension.

- Check stoma length of tube. If this has changed, stop feeding. Gently pull on the tube and feel the resistance of the internal bumper up against the stomach wall. Readjust the external bumper.

Tube Migration Outwards

- Enteral feeding formula entering the stoma tract may be accompanied by pain, redness, swelling and leakage. Check the documented skin depth. If the centimetres mark is further out suspect this problem. Do not feed.
- Any problems contact Enteral Nutrition Nurse Specialist or the gastroenterology unit paediatric surgeons.

Blocked Enteral Feeding Tubes

Prevention

- Ensure regular flushing of enteral feeding tube every four to six hours or as per enteral feeding prescription.
- Flush enteral feeding tube with sterile water before, after and between administering each medication or as per enteral feeding prescription. This helps to prevent interactions between formula and medication.

Actions (if feeding tube is blocked)

- Massage tube – this may loosen blockage.
- Use sterile warm water and a push pull action/pulsatile with a 50 mL catheter tip syringe.
- Do not use coke to unblock enteral feeding tubes as this may damage the tube. Acidic flushes such as coke can exacerbate tube occlusion by causing feed to coagulate or protein to denature.
- If the above processes do not unblock the feeding tube, Clog Zapper can be used when enteral feeding formula has blocked the tube. This does not need to be charted. Clog Zapper is available on the wards. If you do not stock it, contact one of the surgical wards if urgent and place an order through Iproc.

Aspiration

- Aspiration of formula and saliva is a complication which can occur in patients fed via a gastrostomy. The most serious consequence being aspiration pneumonia.
- Patients with a previous history of pneumonia prior to PEG placement are a high risk group.

To prevent aspiration:

- Ensure the patient is elevated to at least 30 degrees while feeding
- Good airway management
- Ensure optimum oral hygiene regime
- Use the gravity method only for bolus feeding
- Contact the patients dietitian and consider referral to Speech Language Therapy if you are concerned about aspiration

Leaking Around the Tube

- A small amount of clear fluid leaking from around the tube is insignificant. Expect to see a small amount of clear drainage in the first one to two weeks following insertion particularly in patients who are neutropenic or on steroid therapy or are diabetic.
- Significant fluid or formula leakage could be caused by:
  too rapid feeding rate or a decrease in gastro-intestinal function and/or motility

Accidental removal of tube

- If the tube dislodges, the stoma tract will begin to heal within 2-3 hours. Immediately insert a Foley catheter (of similar French size) and do not inflate the balloon.
- Tape firmly to the skin and contact the Gastro Day Unit, Ext 88745 or 0273512474 during normal working hours. Afterhours via the operator.
- In Paediatrcs ring the Paeditric Surgeon on call

Discharge Planning

The patient/caregiver must receive education about their tube feeding instructions and follow up.

- Notify dietitian of patient's impending discharge.
- Notify Enteral Nutrition Nurse Specialist of patient's impending discharge. Phone 88745/0273512474
- Ensure patient has referral where applicable.
  - District Nurse

  - Rest Home/ARC
  - OPPH
- Ensure patient/caregivers are familiar with how to obtain feed, pump, syringes, etc. while at home.
- Nursing staff are to provide training on feeding pump use and provide initial supply of giving sets and syringes.
- The Dietitian will arrange community dietitian referral, formula supply, ongoing giving set provision, discharge feeding plan and supply pump/pole on loan.
- Document in the clinical records any information booklets and discharge education given.
- Paediatrics discharge as per enteral feeding policy

Measurement or evaluation

- Enteral Nutrition CNS review of patients clinical record and subsequent feedback as required
- Incident management system reporting

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