Protocol for Oesophageal Stent Insertion and Management at Royal Infirmary of Edinburgh
Introduction

50–80 % of patients diagnosed with oesophageal cancer have inoperable disease at diagnosis (SIGN 2006). The focus of care is looking at improvement of symptoms and therefore improving quality of life. One of the main symptoms in this group of patients is dysphagia. Recently, stent placement has been widely accepted as an option for palliation of the symptoms caused by oesophageal strictures (Guo et al 2008). The concept of using a stent to relieve an obstruction within the oesophagus dates to 1845 when Leroy d’ Etoilles attempted to place an ivory stent through a stenosis (Petruzziello L. Costamagna G. 2002).

Background

Insertion of oesophageal stent is a method used to relieve dysphagia, which is often the most distressing symptom for the vast majority of patients. There are various types of stent; plastic, metal, biodegradeable and removable. Within the NHS Board/Division, self-expanding metal stents (SEMS) tend to be used to palliate symptoms of dysphagia. SEMS are associated with lower mortality, reduced length of hospital stay and improved quality of life when compared with plastic prostheses (SIGN 2006).

Protocol

The decision to insert a stent may be made at the multi-disciplinary team meeting (MDT) or at the discretion of the treating clinician following failure of other therapies to control symptoms. The Clinical Nurse Specialist (CNS) (pager 07659523474 or #6757 at RIE) and the relevant dietician should be informed of the date of the procedure. Appendix 1 illustrates the flowchart for the organisation of stent insertions at Royal Infirmary of Edinburgh.

Unless already an in-patient, patient should be admitted by endoscopy staff prior to procedure and then if applicable should be cared for in Medical Day case. If patients are unfit or requiring controlled drugs for pain management then a bed should be booked in ward 205. Clinical care pre and post stent insertion should be delivered by the appropriate ward medical team or in the case of day case units, by the team working for the consultant under whom the patient is admitted (stent operator). The CNS should be informed that the patient has been admitted.
Patients should be fasted for 6 hours pre procedure and if patient is on Nasogastric (NG) feeding this should be stopped 6 hours prior to procedure.

Diabetic patients and patients on anticoagulant or anti-platelet therapy should be managed according to the relevant endoscopy unit protocols.

**Procedure**

This may be performed in endoscopy or radiology at the discretion of the operator.

- Patient will have been informed of the procedure and been consented
- Ventflon should be present and patient given sedation +/- analgesia

**Post procedure**

- Patients are returned to ward area/MDC and if there is no evidence of perforation (Appendix 2) they are offered sips to drink after 1 hour. If perforation is suspected, the nurse should contact the relevant medical team to review the patient.
- Patients are allowed fluids for the rest of the day and to progress to semi-solids (soft) diet 24 hours later.
- Patients may experience some pain/ discomfort post procedure and analgesia should be prescribed using the analgesic ladder (Appendix 3)
- Patients should be recovered at 45° to minimise the risk of aspiration

**Prior to discharge**

- All patients should be seen by a dietician and given a relevant diet sheet (Appendix 4)
- All patients should be commenced on a high dose proton pump inhibitor (PPI e.g. Lansoprazole fastab 30mg twice daily.)
- Patients should have their analgesic needs met. (Appendix 3)
- Patients should be seen by a clinical nurse specialist (if available – only Tuesday/Thursday/Friday at this site) and given stent advice and contact details. Patients should be informed of the availability of telephone follow-up (if suitable) and if agreeable will be given time and date of 1st call.
- Patients should be reviewed by a member of the medical team.
Follow-up

Those suitable for telephone follow-up (see stent follow up protocol) will be contacted by the CNS the week following discharge and 4-6 weekly thereafter.

References


OESOPHAGEAL STENT PATIENT FLOW (RIE)

OUTPATIENT STENT INSERTION
- Oesophageal stent insertion agreed – patient informed of procedure (Ideally s/b Upper GI CNS - #6757)
- Give patient stent information pack.
- Bloods taken at clinic (U and E’s and FBC and coagulation – if not attending clinic GP to do within 1 week)

- Stent referral completed on Trak.
- Call Endoscopy Co-ordinator on ext 21600 to discuss case prior to booking.
- Endoscopy Co-ordinator will d/w Consultant when/where patient is most suitable to be done (i.e. under X-ray guidance or in endoscopy)
- If Xray required request will be passed by endoscopy co-ordinator to Sam Bow (ERCP co-ordinator 21614)

URGENT (within 1 week)
If complete dysphagia may need to be admitted prior to stenting – admit to GI following D/W ward 205/ GI reg on call.

- Complete W/L form and leave in W/L box (sec room 3335)
- Email dietician (Bev Wallace MDCU or Kerry Yuill 205) with details of admission
- CNS to contact patient by telephone stating admission and fasting details
- W/L to arrange placement of patient

DISCHARGE CHECKLIST
- Pain is well controlled and all patients are discharged with analgesia.
- All patients are discharged on ppI
- Patient has had a review by State Registered Dietician and been given SCAN Stent Diet Information Sheet
- Patients are aware of follow-up plans
Appendix 2 Signs and Symptoms of an oesophageal perforation

The main symptom is pain at first.

Patients with a perforation in the middle portion or lowermost portion of the oesophagus may have difficulty swallowing, chest pain, and difficulty breathing.

Signs of Perforation

- Fast breathing
- Fever
- Low blood pressure
- Rapid heart rate

Patients with a perforation in the top part of the oesophagus may have neck pain or stiffness and air bubbles underneath the skin.

A chest x-ray (CXR) may reveal air in the soft tissues of the chest, fluid that has leaked from the oesophagus into the space around the lungs, or a lung collapse. If a CXR is not definitive, and there is on-going clinical concern, a water-soluble contrast study or CT may provide additional information.
Appendix 3: WHO Analgesic Ladder

http://www.who.int/cancer/palliative/painladder/en/
Appendix 4: Dietary Advice Following Placement of an Oesophageal Stent

Introduction

What is a stent?
A stent is a tube made of a flexible metal mesh. It is passed by mouth into the oesophagus (gullet) and positioned across the area that has narrowed. This allows food to pass more easily into your stomach.

Following the insertion of a stent it is recommended that you follow a soft diet. There are two reasons for this:

- To prevent your oesophageal stent becoming blocked.
- To provide the maximum nutrition with the minimum of effort.

Getting Started
For the first 24 hours following stent placement you should take **fluids only**. Start with warm drinks such as tea. Fluids such as milk, nutritional supplement drinks, strained soups, thin milk puddings and ice cream are all suitable.

During the following days you can gradually build up from fluids to liquidising meals. If you feel comfortable taking the liquidised foods, you can then progress to a soft diet.

At first you may feel anxious about eating. Your confidence will improve as you try different foods and you will soon become familiar with the textures of food that suit you best. This can vary from person to person.

**Helpful Hints**

- Take your time eating and chew foods well.
- Choose soft foods that are easily broken down.
- Serve foods with plenty of sauces or gravy and always have a drink along with food.
- After eating it is important to clear your stent of any food. You can do this by having a warm drink.
- You may need nutritional supplement drinks to ensure you are getting all the nourishment you need. Your dietitian can advise you.

**Avoid the following foods:**

- **Cereals** like muesli, fresh doughy bread, bread containing seeds or grains, toast, pastry and biscuits containing fruit or nuts.
- **Meat and fish** that is very tough or dry and fish which contain bones.
- **Eggs** – avoid overcooked eggs.
- **Fruit and vegetables** with a strong skin or very fibrous stalk. Cook vegetables well and peel fruit. Avoid dried fruit and the pith of fruits like oranges.
- **Nuts and seeds** of any kind.

**Medicines**

You can also take medicines through the stent with care.

- Avoid large tablets or enteric coated medicines which cannot be crushed.
- Suitable liquid/dispersible alternatives may be available.
- Ask your pharmacist for advice.
What to do if food sticks or your stent blocks

- Remain calm.
- Stop eating.
- Stand up and walk around.
- Sip warm fluids.
- If the blockage persists, contact your GP.

Suitable foods

**Breakfast cereals** – ideally those softened and made thinner as required with fortified milk (see page 5) or cream. Weetabix, Cornflakes and Rice Krispies should be soaked in milk prior to eating. Porridge can be strained and thinned with additional milk / cream.

**Bread** – can be too doughy to swallow safely. Avoid fresh bread, soft rolls, hot buttered toast and breads with seeds or grains through them. Choose wholemeal bread that is at least two days old. Allow toast to go cold before applying spread.

**Puddings** – ground rice, semolina and custard, made up with fortified milk, are all very nutritious and can be made as thin as necessary with extra cream, evaporated milk or fortified milk. Tinned, packet and ready-made versions are all excellent alternatives. Extra sugar, jam, syrup or pureed fruit can make all of these tastier and more nourishing.

**Biscuits** – can be a very good snack if taken with a hot drink to soften and wash them down. However avoid biscuits containing fruit and nuts and the very rough wheat meal or wholemeal varieties. Butter or jam can be added to increase nutritional value.

**Soups** – liquidise and dilute to required consistency with cream, fortified milk or water. Grated cheese can also be added. Pulse based soups (e.g. lentil or split pea) are particularly nutritious.

**Meat** – can be minced or liquidised if necessary. Take your time and chew meat well. Add extra gravy or sauce, if required. Ready-prepared meals can be useful e.g. spaghetti bolognaise, corned beef hash, cottage pie or shepherds pie. Avoid very tough meats, large chunks of meat, fatty lumps and bones.

**Fish** – try steamed, microwaved or baked fish with sauce. Add cheese, white or parsley sauces made with fortified milk. Avoid dry fish, fish with bones and fish in batter or breadcrumbs.
**Eggs** – lightly scrambled, poached, or fried. Omelettes and soufflés are also suitable. Add grated cheese, butter or cream to make them more nourishing. Avoid crispy fried eggs and hardboiled eggs.

**Milk** – full cream milk is recommended and it can be fortified as follows; add 2 ozs (4 tablespoons) of dried milk powder to 1 pint of full cream milk. This milk can be taken in any form, hot or cold, and should be included not just in drinks, but also in sauces and puddings.

**Cheese** – add grated cheese to mashed potatoes, sauces, soups (make sure the cheese melts and does not go stringy). Try main meals such as well-cooked macaroni or cauliflower cheese. Avoid grilled cheese e.g. cheese on toast.

**Pasta** – Ensure it is well cooked. Serve with extra sauce.

**Vegetables** - Well-cooked turnip, parsnip, carrot and potato can all be mashed easily with milk, butter, margarine, gravy or sauce. Avoid croquette, chips and roast potato. Avoid tough, fibrous stalks, skins and seeds. Other vegetables may need to be liquidised.

**Fruit** - can be stewed with sugar. Fresh, tinned or frozen fruits can be liquidised. Avoid dried fruit and avoid all fruit skins, seeds and pith.

**Nuts** – It is advisable that you do not eat any kind of nuts.

**Drinks**

Nutritious drinks should be chosen as often as possible in preference to cups of tea and coffee. Choose milk-based drinks like milkshakes, hot chocolate, Horlicks or Ovaltine. Build-Up and Complan are powdered supplement drinks which are added to milk. These are available from chemists and most supermarkets. The savoury varieties are made with hot water and generally are more nourishing than ordinary cup-a-soups.
Yogurt Cooler
¼ pint milk
½ carton fruit yogurt
Mix ingredients together.
Serve chilled.

Fruity Float
½ glass fresh fruit juice
½ glass lemonade
1 tablespoon sugar
1 scoop ice cream
Mix ingredients together.
Serve chilled.

Ginger Lime
1 glass ginger beer
1 small carton natural yogurt
2 tablespoons lime syrup
Mix lime and yogurt together.
Top up with ginger beer.
Serve chilled.

Minted Chocolate
¼ pint milk
1 tablespoon drinking chocolate
4 peppermint creams
Heat ingredients slowly until peppermint creams have dissolved.
Remove from heat and whisk.
Serve warm.

Milk Shake
¼ pint fortified milk
2 tablespoons milk shake syrup / powder
1 scoop ice cream
Mix ingredients together.
Serve chilled.

Fortified Milk
½ pint milk
2 tablespoons dried milk powder
Stir ingredients together.

Cinnamon Spice
¼ pint milk
1 tablespoon golden syrup
pinch of cinnamon
pinch of mixed spice
Heat milk. Add syrup, cinnamon, mixed spice.
Serve hot.

Banana Froth
¼ pint milk
1 small banana
1 scoop ice cream
1 teaspoon sugar
Peel and mash banana. Mix in all other ingredients until blended.
Serve chilled.
Breakfast Options

Cornflakes or Rice Krispies soaked in milk
Porridge with double cream
Weetabix with fortified milk
Ready Brek and fortified milk
Thick and creamy yoghurt
Stewed apple and cream
Scrambled egg
Pureed prunes and sugar

Main Meals

These can be liquidised if wished;

Fish pie (made with sauce and topped with mashed potato)
Mince and mashed potato and mashed veg
Spaghetti in tomato sauce with grated cheese
Macaroni cheese with extra sauce
Broccoli or cauliflower cheese
Scrambled egg (add grated cheese)
Corned beef hash
Minced meat stovies
Potted meat, mashed potato and butter
Shepherd’s pie
Baked beans with grated cheese
Desserts

Use fortified milk or serve with cream or evaporated milk

Custard
Semolina
Instant whip / Jelly whip
Mousse
Crème caramel
Ice cream
Fruit Fool
Thick and creamy yogurts
Pureed fruit and cream

Snacks

Milkshakes
Sponge cake
Chocolate or Fudge (no nuts or fruit)
Yogurt
Mousse
Mashed banana and cream
Build Up or Complan

Note: The information in this leaflet may not be suitable for certain medical conditions e.g. diabetes, food intolerances. It should not replace the advice of your doctor or healthcare team.