

Oesophageal and Duodenal Stent Insertion – Full Clinical Guideline

Reference No: CG-T/2014/147

The Technology

There are various types of stent made of various mesh materials with various coatings or none. A typical stent is manufactured loaded onto a thin delivery device and when it is deployed, it expands to a predetermined shape, typically an 18 to 22 mm tube with flaired ends. The typical stent material/memory metal is Nitinol, covered with a plastic film membrane. However plastic and biodegradable mesh materials also exist (Polyflex, SX Ella-biodegradable stent). Some designs may be removable for example the Hannaro stent. Those used in the oesophagus are usually wire guided whereas those used in the pylorus are typically through the scope stents though may be thin wire guided stents, both used through the scope and under imaging control.

Different deployment technologies are available. Stents either release from the distal end to the proximal end or from the proximal end to the distal end. Distal release stents are typically released as a plastic sleeve is pulled back (eg Hannaro stent) whereas proximal release stents are typically released by pulling on a silk thread (Ultraflex). Stents always shorten towards the end that is released first.

Indications

The main use for G I stents is in malignant strictures in the oesophagus and pylorus. Stents may also be used to treat refractory benign strictures, to cover perforations, and to treat bleeding varices (Dannis stent).

Workup

Prior to elective stent insertion patients should be

1. seen in clinic
 - a. the risks of stenting explained including
 - i. aspiration pneumonia,
 - ii. perforation,
 - iii. pain following insertion,
 - iv. bleeding,
 - v. displacement,
 - vi. unsuccessful insertion.
 - b. CT chest
 - i. Patients with oesophageal malignancy should have up to date CT chest to assess the risk of bronchial or tracheal compression by the oesophageal stent. Stenting of the oesophagus is contraindicated in the presence of tracheal or bronchial stenosis secondary to the tumour.
 - c. Assess location of upper end of stent.
 - i. Sufficient space for placement of high stents above the stricture needs to be allowed. Typically stents would not be placed if the stricture is less than 2 cm below the cricopharyngeal sphincter. If in doubt a removable stent can be used.
 - d. Choice of stent planned.
 - i. SCC use covered ultraflex preferred
 - ii. Adenocarcinoma – use ultraflex uncovered as least risk of displacement.
 - iii. Benign disease or need to remove stent use Hannaro or equivalent fully covered removeable stent. Or in special circumstances SX-ELLA biodegradeable stent.
 - e. Is imaging needed if so book room 7 and radiographer (combined endoscopic and image guided stents) or book Xray for Xray only stents.

Stent Insertion.

Patients for stents need to have :

1. an INR checked
2. Stop anticoagulants as per anticoagulant guidelines.
3. A bed for post stent recovery- 10% of patients require a period of post stenting pain relief.
4. Inform upper GI CNS and Dietetics.

Endoscopy

Book with endoscopy using endoscopy request form. INDICATE IF X-RAY IMAGING NEEDED AND DISCUSS THIS WITH ENDOSCOPY NURSE COORDINATOR IF NECESSARY.

Stents are usually inserted under direct vision and wire guided. The stomach is entered using either a ultraslim (6mm) endoscope or a standard scope and TTS balloon used to gain access to the stomach, a guide wire placed and the stent then placed over the guide wire and positioned under endoscopic guidance. BSG guidelines to avoid topical anaesthetics combined with sedation should be followed to avoid the risk of aspiration pneumonia.

Radiology

Book using iCM for interventional procedures. Must be discussed with GI radiologists.

Joint

Certain cases e.g. difficult duodenal stents are best done as combined procedures. This needs liaison between endoscopy and radiology consultants. The Gastroenterologist will liaise with the Radiologist and Endoscopy. A yellow endoscopy request form is still required.

Aftercare

Stent patients will require:

1. A specialist diet – dietetic review is mandatory – see post stent diet sheet on intranet.
2. All patients with stents across the cardia will need high dose PPI therapy as the stent will allow free gastro oesophageal reflux.

Complications

- i. aspiration pneumonia,
- ii. perforation,
- iii. pain following insertion,
- iv. bleeding,
- v. displacement,
- vi. unsuccessful insertion,
- vii. bolus food obstruction,

Documentation Controls

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