Endoscopic Palliation of Malignant Dysphagia

1. Scope of the guideline

This guidance has been produced to support endoscopic palliation of malignant dysphagia from oesophageal cancer.

2. Guideline background

2.1 Dysphagia is a common presentation of oesophageal cancer, and it is usually indicative of late disease.
2.2 Symptoms arise when the normal oesophageal lumen (~25mm) has reduced by at least half (~13mm).
2.3 Palliating dysphagia is an important aspect of care since only a minority of patients presenting with oesophageal cancer are treated surgically or oncologically with curative intent.
2.4 The decision to offer endoscopic palliation will usually be made through the multidisciplinary team (MDT).

Guideline statements

3. Oesophageal dilatation

3.1 Dilatation of malignant strictures can be via wire guided Bougies or through the scope (TTS) balloons.
3.2 The risk of oesophageal perforation quoted by the British Society of Gastroenterology (BSG) following dilatation of benign strictures is 1.1% with a mortality of 0.5% and higher for dilatation of malignant strictures (6.4% with a mortality of 2.3%).
3.3 Aside from malignancy, other factors increasing the risk of perforation include: features related to the stricture (eg complex, tortuous and fibrous or infiltrative strictures), the age of the patient and the experience of the endoscopist.
3.4 Since perforation of a malignant stricture can convert a (potentially) curable lesion into an incurable lesion, dilatation of a malignant oesophageal stricture should generally be avoided unless it is part of a definitive management plan.
3.5 Dilatation may form part of a management plan – eg to place feeding tube prior to chemo/radiotherapy or stent.
3.6 The benefit of dilation alone in relief of dysphagia is short lived ~ 1-2 weeks and so the BSG guideline suggest it should be reserved for those considered to have an extremely short life span (four weeks or less) and unable to swallow saliva (http://www.bsg.org.uk/images/stories/docs/clinical/guidelines/oesophageal/ogcancer.pdf)

4. Tumour debulking

4.1 Chemical debulking of bulky and exophytic tumours with absolute alcohol injection causes tissue necrosis and temporary relief of dysphagia has been described, but is not recommended.

4.2 The doses of alcohol required have not been standardised – and it is difficult to judge how to confine the alcohol to tumour tissue alone.

4.3 The scheme proposed in the original BSG guideline is to inject tumour with 0.5–1 ml aliquots of 100% alcohol. Complications include chest pain, perforation and mediastinitis.

4.4 Chemical debulking with alcohol ***is not*** endorsed in the latest BSG guidelines.

4.5 Intralesional injection of chemotherapy (eg Cis-platinum gel) is being evaluated in research protocols

5. Endoscopic contact therapies: argon plasma coagulation (APC) and lasar

5.1 APC has been be used to ablate exophytic intraluminal oesophageal tumours and haemorrhagic tumours.

5.2 Typically an adequate luminal patency can be established in two thirds of patients in a single session or APC and in around a quarter of patients two sessions are required.

5.3 The disadvantages of APC are that:

a. unlike self–expanding metal stents (SMS) most patients will require repeated sessions of therapy every three or four weeks
b. a median of 6 sessions are required
c. around a third of patients treated with APC eventually require a stent.
d. historically laser has been used with similar efficacy but has now been superseded by APC because of its widespread availability

6. Endoscopic stent insertion

Self-expanding metal stents (SMS) have replaced the earlier rigid oesophageal stents. They are easier to place, associated with much lower morbidity and mortality.

6.1 Self-expanding metal stents choice

SMS are produced by a number of manufacturers and there are very few comparative trials to choose between different models.

6.2 Placement method

6.2.1 Stents can be placed endoscopically with or without fluoroscopic guidance and also fluoroscopically without endoscopic guidance.

6.2.2 Both methods are described and the choice will be determined by local interest and expertise.

6.3 Stent choice

It is assumed that familiarity and local expertise with a small selection of particular brands of oesophageal stents including proximal release stents for proximal oesophageal tumours and their deployment characteristics exceeds any perceived advantage of using any one particular stent over another.

6.4 Stent Length

A stent 3-4cm longer than the tumour is usually selected to give an adequate margin either side of the stricture and allow the stent to embed.

7 Complications

Successful deployment of the stent (with improvement of dysphagia) is anticipated in 90% of patients. Minor complications are frequent and include:

7.1 Chest pain

This is usually transient and can often be managed with simple analgesia and only occasionally does this need to escalate to opiates. Pain is often more severe and more difficult to deal with in patients with bulky tumours with extensive mediastinal involvement and in those with mediastinal pain prior to stent. Anticipatory analgesics should be prescribed at the time of stent insertion. Pain may be less with smaller diameter stents (18mm) vs larger (24mm)

7.2 Perforation or leak

Consideration should be given to a leak of perforation if the pain is persistent and or accompanied by systemic upset.

7.3 Haemorrhage/ fistulization

A covered SMS can be used to cover a tracheo-oeosphageal fistula.

7.4 Stent migration

7.4.1 In various series stent migration is stated to occur in upto 20% of cases.
7.4.2 It is more common in distal oesophageal tumours.
7.4.3 Methods of stent retrieval are described but seemingly rarely required as, fortunately, in practice the anticipated complications of stent migration (e.g. bowel obstruction or perforation) appear uncommon.

7.5 Stent overgrowth

7.5.1 The frequency of tissue ingrowth through the stent is reduced in stents covered with s semi-permeable membrane a ’covered stent’. However, a degree of tissue ingrowth in the uncovered upper and lower segment of the stent is required to stabilise stent position and deter stent migration.
7.5.2 Exuberant over growth and tissue ingress will cause dysphagia.

7.5.3 Tissue overgrowth causing dysphagia has a benign cause in about half of cases (granulation tissue, reactive hyperplasia and fibrosis).
7.5.4 Management options include (argon plasma coagulation) APC or placing a further stent into the existing stent. APC is preferable as an intervention if the patient's prognosis is likely to only be weeks.

7.6 Contraindications & relative contraindications to stent placement

There is no consensus as to absolute contraindications for stent.

7.7 Relative contraindications

7.7.1 An SMS is not usually considered in patients with very short life expectancy.
7.7.2 Stenting very angulated tumours is less likely to successful compared to straighter strictures.

7.8 Tumour location

Certain tumour locations are less favourable to successful stent placement.

7.9 Proximal tumours

7.9.1 Very proximally placed tumours (within 2cm of the cricopharyngeus complex) can be difficult to palliate.
7.9.2 As stents have to be placed high in the oesophagus to palliate dysphagia, they can be uncomfortable to the patient causing a persisting foreign body sensation.
7.9.3 There is also a risk of aspiration if cricopharyngeus function is compromised.
7.9.4 For this reason some expert opinions mandate fluoroscopic guidance in placing stents at this site along with direct endoscopic visualisation as the stent is deployed.

7.10 Mid-oesophageal tumours

7.10.1 Generally a good placement is frequently achieved here as the stent will be anchored proximally and distally.
7.10.2 There is the potential for large airway compression with stent expansion in oesophageal tumours with a bulky mediastinal component.

7.11 Distal oesophageal tumours

Stent migration is more common at these distal oesophageal or cardia sites, as the distal end of the stent projects into the fundus and is not fixed to luminal wall. The risk of migration is said to be attenuated by using uncovered stent in this location at the cost of a 20-30% risk of recurrent dysphagia from tumour ingrowth.

7.12 Reflux post stent insertion

7.12.1 Gastro-oesophageal reflux is common following stenting of distal tumours that traverse the gastro-oesophageal junction.
7.12.2 This can be anticipated and usually can be managed by high dose proton pump inhibitors, and the usual lifestyle advice for reflux such as sleeping with the head of the bed raised.
7.12.3 Stents with a windsock like antireflux devices can be used, but they are said to be more difficult to deploy. The 2011 BSG guidelines do not endorse antireflux stents**.**

7.13 Timing of endoscopic intervention

7.13.1 No data are available regarding timing of intervention.
7.13.2The patient's perception of dysphagia compared with the volume of the tumour assessed at endoscopy may be discordant.
7.13.3Pragmatically, a stent is usually considered once it clear that treatment is to be palliative and the patient has significant dysphagia such that they are no longer able to manage food with a "sloppy" consistency.

8 Other oesophageal stents

8.1 Non-metallic oesophageal stents have become available recently and include 'plastic' stents and biodegradable stents.
8.2 Self Expanding Plastic Stents (SEPS) are said to have the advantage of being removable and repositionable, though experience in these is limited.
8.3 SEPS and biodegradable oesophageal stents may ultimately afford opportunity of palliative stenting prior to definitive surgical therapy – as yet their place in routine practice is uncertain.

9 Alternatives to endoscopic intervention for malignant dysphagia

The option of endoscopic palliation of dysphagia has to be viewed in the context of a portfolio of approaches. These include the following options:

9.1 Radiotherapy

9.1.1 Palliative external beam radiotherapy can be used to alleviate malignant dysphagia.
9.1.2 Compared to a SMS, radiotherapy will take some weeks to achieve maximal relief of dysphagia.
9.1.3 Hard data supporting the contention that complications are more frequent in patients having oesophageal stenting post radiotherapy +/- chemotherapy in the era of SMS is scant. However the 2011 BSG guidelines cite a paper reporting complications in up to 23% in this group.
9.1.4 Brachytherapy, whereby the radiotherapy is delivered internally is better tolerated and more successful than external beam radiotherapy.
9.1.5 A limited service is available in Wolverhampton and is being developed at University Hospitals Birmingham NHS Foundation Trust. If a patient is likely to

survive 3 months, clinical trials suggests improved quality of life if brachytherapy is undertaken rather than SMS placement.

9.1.6 An ongoing trial is addressing the outcome of stent + radiotherapy vs radiotherapy alone.

9.2 Chemotherapy

9.2.1 Small studies suggest that systemic cisplatin based chemotherapy will relieve dysphagia in the majority of patients with oesophageal cancer. Compared to SMS however this benefit is only evident after a one cycle of treatment extending over a number of weeks and has to be counterbalanced against the toxicity of systemic chemotherapy.

9.2.2 SMS placement does not necessarily preclude chemotherapy

10 Patient information and counselling

All patients, and with their consent, their partners will be given access to appropriate information during their investigation and treatment, and on diagnosis will be given the opportunity to discuss their management with a clinical nurse specialist who is a member of the relevant MDT. The patient should have a method of access to the Upper GI team at all times.

Monitoring of the guideline

Implementation of the guidance will be considered as a topic for audit by the NSSG in 3 years

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References

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