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Cochrane Nursing Care Field – Cochrane Review Summary

Produced for the

Gastroenterology Nursing Journal

***TITLE: Interventions for dysphagia in
oesophageal cancer***

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BACKGROUND:

Oesophageal cancer is the sixth most common cancer globally and has a poor prognosis. Palliation rather than curative treatment has become the preferred option, and dysphagia is a dominant symptom for more than 70% of these patients.

Dysphagia is a difficulty with eating, drinking or swallowing and affects the ability to manage oral intake safely, increasing the primary risks of dehydration, malnutrition, aspiration and aspiration pneumonia.

Assessed and managed at the pre-oral, oral, oro-pharyngeal and oesophageal stages, dysphagia ranges from mild to severe. Non-surgical interventions such as modified food textures and fluid consistencies, or changes to posture and positioning, can be used at pre-oral, oral and oro-pharyngeal stages to achieve positive clinical and quality-of-life outcomes.

Palliative care for patients with advanced oesophageal and gastro-oesophageal carcinoma often requires intervention for dysphagia. Dysphagia management at the oesophageal stage includes stents, external beam radiation treatment, brachytherapy, chemo-radiotherapy, laser treatment and photodynamic therapy. With this abundance of treatment options, there is a need for evidence examining the best treatments to improve the management of eating and drinking difficulties in this clinical population.

OBJECTIVES:

The review aims to systematically analyse and summarise the efficacy of different interventions used in the palliation of dysphagia in primary oesophageal and gastro-oesophageal carcinoma. This is an update of the previous review published in 2009.

INTERVENTION/METHODS:

The review identified randomised controlled trials where recruitment was based on diagnostic criteria: patients with inoperable or unresectable primary oesophageal cancer due to undergo palliative treatment, including patients with primary squamous or adenocarcinoma of the oesophagus or the gastro-oesophageal junction. Studies with patients showing extrinsic oesophageal compression from other tumours, or patients with recurrence of dysphagia or recurrence of tumour after previous surgery were excluded.

MAIN ANALYSIS:

Comparing Self-Expanding Metal Stents (SEMS) with plastic stents for dysphagia in oesophageal cancer, where the primary outcome was improvement in dysphagia.

A wide range of additional interventions were included for cross-comparison, where combinations were acceptable if treatments were present in both arms of the study, for example chemotherapy, photodynamic therapy (PDT), external beam radiotherapy.

PRIMARY OUTCOME:

- Improvement in dysphagia.

SECONDARY OUTCOMES:

- dysphagia improvements in subgroups (other interventions)
- persistent or recurrent dysphagia
- technical success of the procedure
- mortality associated with the procedure
- 30-day mortality
- initial hospital stay
- all major adverse effects
- quality of life

The review reports a wide variation in the evaluation and reporting of the different secondary outcomes. To compare different brands and models of stents, the review included additional outcomes applicable to the subgroup, for example stent migration, degree of concealment, reflux score.

RESULTS:

From an initial 785 records, the review identified 53 RCTs, comprising 51 full studies and 2 abstracts, and involving 3684 patients; the earliest study was published in 1983, with the most recent study published in 2013. Assessing bias, the authors considered 47% (*n*=25) of the studies as high quality.

Two studies were used to compare both dysphagia improvement overall and dysphagia improvement in the subgroups to analyse the primary outcome. Results are summarised below:

Outcome	Number of Studies	Number of Participants	Standard Mean Difference	Effect Size	Quality of Evidence
Dysphagia improvement	2	231	-0.36 (-0.63 to -0.09)	-0.30 (-0.69, 0.10)	Moderate
Subgroup analysis dysphagia improvement	2	178	-	-0.25 (-0.50, 0.00)	Moderate

For the primary outcome, results show that the traditional insertion of rigid plastic stents is less safe and less effective at reducing dysphagia than SEMS, with a high occurrence of recurrent dysphagia. In comparison to other modalities, plastic stents are not effective in improving dysphagia.

CONCLUSIONS:

SEMS insertion is safe, effective and quicker in palliating dysphagia for this patient group when compared to rigid plastic stents. Additional positive outcomes include:

- High-dose intraluminal brachytherapy is a suitable alternative to SEMS insertion, with fewer requirements for re-intervention, and might provide additional survival benefit with a better quality of life
- Some anti-reflux stents and newly-designed stents lead to longer survival and fewer complications compared to conventional stents
- Combined brachytherapy and SEMS insertion reduce the requirement for re-intervention
- Combined brachytherapy and radiotherapy reduce the requirement for re-intervention

The following interventions show a high incidence of delayed complications and recurrent dysphagia, and are not recommended:

- Rigid plastic stent insertion
- Dilatation alone or combined with other interventions
- Chemotherapy alone

Regarding quality of life, there is no superiority of one intervention over another, although the authors suggest that different combinations of treatments could produce better outcomes and fewer complications.

IMPLICATIONS FOR PRACTICE:

Results are relevant for nurse specialists working in gastroenterology, oncology and palliative care services, as well as nursing teams working with Radiotherapy, Speech and Language Therapy, Clinical Nutrition and Dietetics services. This review of non-curative interventions contributes to high-quality perioperative support and palliative care standards.

This review gives support to the provision of evidence-based information for patients and their families. Understanding the risks and complications of interventions enables clearer aims and personalised post-surgical care when managing mealtimes and dysphagia for these patients, within palliative care guidelines. Evidence for interventions and their outcomes supports risk assessments for maintaining oral intake. In addition, this report identifies procedures with an increased risk of immediate and delayed complications.

Further studies are required to address the timing of intervention and the cost effectiveness of interventions. The review lists a number of newly-designed, newly-available stents on the

market and acknowledges that advances in design and technology are likely to result in improved outcomes for this patient group undergoing treatment in the future. However, quality of life outcome measures following SEMS insertion need further investigation to ensure that treatments produce positive outcomes for patients and families.

SOURCE DOCUMENT:

Dai, Y., Li, C., Xie, Y., Liu, X., Zhang, J., Zhou, J., Pan, X., & Yang, S. (2014) Interventions for dysphagia in oesophageal cancer *Cochrane Database of Systematic Reviews* Issue 10 Art No.: CD005048 DOI:10.1002/14651858.cd005048.pub4.