AGA technical review on management of oropharyngeal dysphagia

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Authors' objectives
To review which evaluations and treatments should be rendered to optimise patient treatment for oropharyngeal dysphagia.

Searching
MEDLINE (1981 to June 1997) was searched using the subject headings deglutition and deglutition disorders, and using the keywords deglutition, dysphagia, dysphagic, swallow and choking. Non-English studies were excluded.

Study selection
Study designs of evaluations included in the review
All study designs excluding letters, case reports and single case studies were included in the review. Studies reported in the review included: RCTs, controlled multiple crossover, controlled nonrandomized concurrent control, controlled nonrandomized historical control, uncontrolled case series, uncontrolled retrospective case series, retrospective case-control and uncontrolled prospective.

Specific interventions included in the review
Interventions to treat and rehabilitate patients with oropharyngeal dysphagia. Interventions reported in the review included surgery (cricopharyngeal myotomy and dilation), swallowing therapy, diet modification, thermal stimulation, fauces, palatal prosthesis and combination therapies consisting of multiple components (not specified). Interventions were compared with each other and in the case of diet modification with normal diet.

Participants included in the review
Adult patients with oropharyngeal dysphagia. The review included patients suffering from stroke, postpolio syndrome, neurogenic cricopharyngeal dysfunction and post surgical cricopharyngeal dysfunction. Patients with dysphagia caused by head and neck cancer, or surgery were excluded.

Outcomes assessed in the review
Outcome measures were not defined a priori. Outcomes reported in the review included: incidence of pneumonia, dehydration, calcium-nitrogen deficit, weight-change, incidence of oral feeding, mortality and other unspecified subjective measures.

How were decisions on the relevance of primary studies made?
The authors do not state how the papers were selected for the review, or how many of the authors performed the selection.

Assessment of study quality
Individual studies were graded according to the criteria defined by Sackett et al (see Other Publications of Related Interest). The authors do not state how the papers were assessed for validity, or how many of the authors performed the validity assessment.

Data extraction
Data tables reported in the review provided details of the population, study design, intervention, study duration, outcome measures and grade of evidence.

Methods of synthesis
How were the studies combined?
A narrative synthesis of the studies was presented.

How were differences between studies investigated?
No formal assessment of heterogeneity was performed but differences between the studies were discussed in the text.

Results of the review
Thirty-nine studies were reported including 2 RCTs, 3 non-randomised controlled study, 33 retrospective and prospective case series and 1 case-control.

Numbers of participants were unclear as some studies were included in more than one category and different numbers of participants were reported in some cases.

Cricopharyngeal myotomy ((10 retrospective and prospective case series for structural cricopharyngeal disorders)(15 retrospective and prospective case series for neuropathic and myopathic dysphagia)): Based on level C evidence the authors' report that there are sufficient grounds to presume that cricopharyngeal myotomy is beneficial in cases of dysphagia caused by structural lesions. They also report that there are no absolute indications for cricopharyngeal myotomy, and that currently available clinical data do not strongly support treatment with cricopharyngeal myotomy for neuropathic or myopathic causes of oropharyngeal dysphasia. Outcome measures considered in individual studies included: global assessment, standardized questionnaire, dietary modification, aspiration, dietary consistency, scintigraphy and videofluoroscopic.

Diet modification (1 RCT):
There is little evidence that nonoral feeding reduces or eliminates the risk of aspiration. Outcome measures considered in the study were not reported.

Swallowing therapy (2 RCTs, 3 nonrandomised controlled studies and 7 retrospective and prospective case series):
The literature provides reasonable evidence of the plausibility of swallowing therapy but minimal evidence of efficacy. Outcome measures considered in individual studies included: pneumonia, dehydration, nutritional deficit, death, weight change, caloric intake, radiographic aspiration, oral feeding, ease of feeding, dysphagia and other subjective measures.

Other interventions:
There has been little systematic evaluation of the responsiveness of dysphagia to anti-parkinsonian medication. The short-term effect of central dopaminergic stimulation on pharyngeal mechanics is controversial. Improvement of oropharyngeal dysphagia in response to medical therapy for myasthenia gravis (acetylcholinesterase inhibitor and/or immunosuppressive drugs) is variable and often less satisfactory than the response of other disease manifestations. There was insufficient data from the remaining studies to allow reliable inferences to be drawn about the efficacy of palatal prosthesis, thermal stimulation of the fauces and the other unspecified combination therapies. Outcome measures considered by individual studies were not presented.

Authors' conclusions
Management of oropharyngeal dysphagia is currently an inexact science. The quality of evidence supporting much of what is generally accepted as current best practice is not high but is backed by reasonable evidence of biological plausibility and weight of clinical opinion.

CRD commentary
The authors summarise the literature regarding the treatment of patients with oropharyngeal dysphagia. They also acknowledge the lack of rigorous data available and the need for further research to validate their conclusions.

However they provide insufficient details of how they conducted the review process to answer their question in a
reliable manner. Non-English literature was excluded so they may have missed data. They only searched one database and made no specific attempts to locate unpublished work so increasing the risk of publication bias. Evidence was graded according to its quality but little information was provided as to the validity issues of individual studies. The authors discussed differences between the studies and so their use of a narrative summary would seem to be appropriate. In view of these factors the review findings should be interpreted with great caution.

Implications of the review for practice and research
Research: The authors state that it is the responsibility of the professional groups involved in the care of these patients to undertake studies that examine rigorously the efficacy of current and future therapies, both medical and surgical, and the diagnostic and predictive utility of tools for the measurement of swallowing mechanics and dysfunction.

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Other publications of related interest

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Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.