American Gastroenterological Association Medical Position Statement on Management of Oropharyngeal Dysphagia

This document presents the official recommendations of the American Gastroenterological Association (AGA) on the management of oropharyngeal dysphagia. It was approved by the Clinical Practice and Practice Economics Committee on May 17, 1998, and by the AGA Governing Board on July 24, 1998.

Clinical evaluation and management of oropharyngeal dysphagia lends itself to a polydisciplinary effort because of its inherent complexities: (1) oropharyngeal dysphagia can be a manifestation of any of a multitude of systemic diseases, as opposed to a disease specific to the oropharynx; (2) oropharyngeal dysphagia often results from a functional rather than mucosal or structural aberration, as is often the case with esophageal dysphagia; (3) deglutition is a rapid, complex neuromuscular response that requires unique methodologies specifically tailored to its clinical evaluation; and (4) afflicted patients often present with accompanying neurological impairment limiting their ability to cooperate with their evaluation and therapy. Given this broad array of considerations, it is impossible to develop a single strategy applicable to all potential clinical scenarios; however, certain principles do emerge, permitting the clinician to prioritize clinical objectives. Summarized below and in Algorithm 1 is a brief outline of how to approach these objectives developed from a critical review of the medical literature on the management of oropharyngeal dysphagia.1

1. Ascertain Whether Oropharyngeal Dysphagia Is Likely and Identify the Likely Etiology

Key at this stage are the history and physical examination. In obtaining the history, the clinician must (1) use symptom assessment to distinguish oropharyngeal dysphagia from globus, xerostomia, or esophageal dysphagia; (2) think broadly to facilitate identification of treatable systemic or metabolic disease; and (3) identify possible drugs that may be contributing to dysfunction, e.g., anticholinergics, phenothiazines, botulinum toxin, penicillamine, metoclopramide, high doses of aminoglycosides, amiodarone, HMG-CoA reductase inhibitors, or procainamide. The primary goals of the physical examination are to (1) identify features of potential underlying systemic or metabolic disorders; (2) identify evidence of and severity of neurological damage; and (3) identify potential pulmonary and nutritional sequelae of dysphagia. In a limited number of instances, the history and physical examination will mandate laboratory tests, imaging tests, or histological examinations for verification of underlying infectious (e.g., syphilis, candida), metabolic (e.g., Cushing's disease, thyrotoxicosis), or neuromuscular (e.g., myopathy, myasthenia, multiple sclerosis) conditions.

2. Identify Structural Etiologies of Oropharyngeal Dysfunction

The second aim of clinical evaluation is to identify surgically (or endoscopically) treatable structural abnormalities. Caution is required in interpretation of the functional significance of relatively common, and usually incidental, radiographic abnormalities such as cervical osteophytes or cricopharyngeal bars. Consistent grade C evidence (case series without controls) supports the use of cricopharyngeal myotomy for treatment of Zenker's diverticulum and dilation for benign proximal esophageal webs or stenoses. These lesions, along with signs of neoplasm, infection, strictures, or diverticuli, each of which implies a specific therapy, are sought by careful radiographic and/or endoscopic examination of the oropharynx and proximal esophagus. Even when effective therapy does not exist for the underlying condition, it is a firmly held conviction among practitioners, and an expectation among patients, that provision of an accurate diagnosis and prognosis is an important medical goal.

3. Ascertain the Functional Integrity of the Oropharyngeal Swallow

Broad categories of swallow dysfunction are (1) inability or excessive delay in initiation of the pharyngeal swallow, (2) aspiration of ingestate, (3) nasopharyngeal regurgitation, and (4) postswallow residue of ingestate within the pharyngeal cavity. The clinical investigation...
must evaluate these parameters of dysfunction because the morbidity of swallowing dysfunction, ranging from subjective dysphagia to dehydration, wasting, aspiration pneumonia, and even death, parallels the severity of dysfunction measured along these parameters. Characterization of the severity of all four categories of dysfunction enumerated above requires a videofluorographic or cineradiographic examination, commonly referred to as a modified barium swallow. Nasoendoscopy of the oropharynx, which might be done to evaluate for malignancy, can provide clues to a neurogenic/myogenic etiology of swallowing dysfunction (e.g., salivary pooling, cord paresis) but rarely will fully characterize the dysfunction. In some instances, especially with suspected incomplete upper esophageal sphincter (UES) relaxation or reduced UES opening, manometry, preferably combined concurrently with videofluoroscopy, may allow further delineation of the underlying mechanism of dysfunction and determination of the appropriateness of therapy (e.g., dilation or cricopharyngeal myotomy). However, at least in the case of neurogenic/myogenic dysphagia, such an approach has not yet been proven to influence outcome.

4. Evaluate the Risk of Aspiration Pneumonitis
At this point, the clinician must establish whether gastrostomy feeding should be instituted on the reasonable, but unproven, premise that gastrostomy feeding reduces the risk of aspiration pneumonia. This decision is
made on the basis of videofluoroscopic analysis of the severity of swallowing dysfunction, the estimated likelihood that therapeutic maneuvers (tested during videofluoroscopy) will adequately compensate for observed dysfunction, the natural history and prognosis of the underlying disease process, and the patient's cognitive ability. In some instances, both because tube feeding does not necessarily eliminate the risk of aspiration pneumonia and because it is necessary to eliminate aspiration of oral secretions, surgical procedures aimed at minimizing aspiration (epiglottoplasty, partial or total cricoid excision, laryngeal suspension, vocal fold medialization, glottic closure, laryngotracheal diversion, or laryngectomy) may be needed.

5. Determine if the Pattern of Dysphagia Is Amenable to Therapy

Once structural lesions have been excluded, data supporting surgical intervention (e.g., cricopharyngeal myotomy, laryngeal suspension) for management of oropharyngeal dysphagia are weak. Level C evidence (case series without controls or clear outcome measures) suggests an overall response rate from myotomy of approximately 60% in this class of patients, but benefit in an individual cannot be predicted with certainty. Without further, well-designed studies in clearly defined subsets of patients, the decision about myotomy will remain empirical, to be embarked on only after the patient has been informed of the risks and possible but unproven benefits. More commonly, the introduction of swallowing therapy is appropriate at this point. Current strategies of swallowing therapy are modification of diet, swallowing posture, or swallowing technique. Modifications of swallowing technique are intended to strengthen weak oropharyngeal muscle groups, thereby improving their speed and range of movement, and/or to selectively modify the mechanics of the swallow to facilitate bolus flow and minimize aspiration. Application of swallowing therapies depends on videofluoroscopic definition of the relevant mechanism of dysfunction and examination of the short-term effects of therapeutic strategies designed to eliminate or compensate for that dysfunction. The strongest recommendation that can be made pertains to diet modification, with efficacy studies showing reduced risk of airway penetration and of aspiration pneumonia. On these grounds, and considering the relatively low cost involved, routine introduction of dietary modifications in patients at risk for aspiration pneumonia is logical. The literature provides reasonable evidence of the biological plausibility of other modalities of swallowing therapy but minimal evidence for their efficacy. Although available data are inconclusive, swallowing therapy may be helpful in certain patients. We recommend that swallowing therapy be used methodically based on the convincing demonstration of biological plausibility of specific techniques, consistent low-grade evidence suggesting efficacy, low cost, and absence of risk. However, large-scale controlled trials are needed to clarify the utility of swallowing therapy.

References