

Dysphagia in the Elderly

Abraham Khan, MD^a, Richard Carmona, BA^b,
Morris Traube, MD, JD^{a,*}

KEYWORDS

• Dysphagia • Oropharyngeal • Esophageal • Swallowing • Motility

KEY POINTS

- Dysphagia, or difficulty swallowing, is a common problem in the elderly and can cause malnutrition and significant morbidity.
- Key findings on clinical history and physical examination can suggest whether the patient has either predominantly oropharyngeal or esophageal dysphagia and guide the appropriate workup and treatment of these patients.
- The most common causes of oropharyngeal dysphagia are of neurologic origin and can be managed in conjunction with a clinical swallow specialist.
- Esophageal dysphagia may result from structural or functional disorders, and a video barium esophagram is a good initial test in the workup of these patients. Often a gastroenterologist will be consulted for evaluation, endoscopy, or manometry, followed by appropriate treatment.

INTRODUCTION

Dysphagia, or difficulty swallowing, is a common problem in the elderly. For example, nearly 50% of all patients residing in nursing homes suffer from a swallowing disorder.¹ One study found that 63% of elderly patients who denied any history of swallowing difficulties had abnormal swallowing parameters on radiologic swallow studies.²

The problem will certainly become more widespread. From 2010 to 2030, the elderly population is expected to increase from 39 million to 69 million Americans.³ In 2050, elderly Americans, defined as those at least 65 years old, are expected to make up 20% of the total population, a substantial increase from 13% in 2010.⁴ In addition to the discomfort that patients have from dysphagia, the complications associated with swallowing difficulty are substantial. Elderly patients with dysphagia have a significantly elevated risk of malnutrition and aspiration pneumonia. This risk is particularly

^a Division of Gastroenterology, Department of Medicine and Center for Esophageal Disease, NYU School of Medicine, 530 First Avenue, SKR 9N, New York, NY 10016, USA; ^b NYU School of Medicine, 550 First Avenue, New York, NY 10016, USA

* Corresponding author.

E-mail address: Morris.Traube@nyumc.org

true in the subpopulation with oropharyngeal dysphagia of neurologic origin, that is, cerebrovascular disease, brain injury, or neurodegenerative disease.

A study using the Subjective Global Assessment (SGA) to assess nutritional status found that 16% of patients with dysphagia related to nonprogressive brain disorders had concomitant malnutrition, whereas malnutrition was noted in 22% of patients whose dysphagia stemmed from neurodegenerative disease.⁵ Elderly patients with malnutrition resulting from dysphagia show increased morbidity and mortality from several factors, including, but not limited to, a lowered immune response, decreased ability to recover from illness and heal wounds, and weakened respiratory drive/muscle strength.^{6,7} Because of the likelihood of choking and aspirating with a swallowing disorder, which can aid in bacterial colonization, aspiration pneumonia is also common in patients with dysphagia. Up to 50% of patients with oropharyngeal dysphagia in nursing homes have aspiration pneumonia within 1 year, and the mortality rate approaches 45%.⁵

ANATOMY AND PHYSIOLOGY OF SWALLOWING

Before reviewing the specific swallowing disorders and the relevant approach to diagnosis, a basic understanding of the anatomy and physiology of swallowing is essential.⁸ Typically, the process of swallowing is broken down into 3 primary phases: oral, pharyngeal, and esophageal. The oral phase, the only voluntary phase of swallowing, is often divided again into 2 subphases: the preparatory and transport phases.

During the oral preparatory phase, food enters into the oral cavity to be chewed and formed into an appropriate bolus for swallowing. This phase is dependent on voluntary action of chewing and swallowing the meal for nutrition. The coordinated manipulation and mastication of the food depends on several facial muscles and their cranial nerve signals, whereas chemoreceptors and mechanoreceptors are responsible for the stimulation of salivary glands. When the food has been adequately manipulated by means of mastication and salivary coating, the oral transport phase occurs. During this phase, the tongue moves the bolus posteriorly toward the oropharynx for swallowing.

During the pharyngeal phase, the velopharyngeal muscles mediate the closure of the nasopharynx to avoid nasal regurgitation. Preventing food from entering into the airway is one of the most important aspects of swallowing and requires the coordinated effort of the epiglottis, the vocal cords, and the larynx. The first step of this process is the closure of the true vocal cords, which is the most reliable protection against aspiration. This is followed by closure of the false vocal cords and superior displacement of the larynx. The superior and anterior placement of the larynx inverts the epiglottis so that it can further protect against aspiration. The other major function of the retroverted epiglottis is to route the bolus to the pyriform sinuses located on opposite sides of the pharynx. From the pyriform sinuses, the superior, middle, and inferior constrictor muscles contract respectively and are responsible for pharyngeal peristalsis. Mechanoreceptors are then continuously stimulated to promote the contraction of pharyngeal muscles until the bolus has completely passed into the esophagus. The pharyngeal phase of swallowing terminates when the bolus passes through the upper esophageal sphincter (UES), which is composed mostly of the cricopharyngeus muscle and fibers from the inferior pharyngeal constrictor.

After the bolus passes the UES, the esophageal phase of swallowing begins, and is entirely under involuntary control. The esophagus has 2 muscle layers, an inner circular muscle layer and an outer longitudinal muscle layer. Both central and peripheral neuromuscular control are necessary to pass the bolus from the striated muscle portion of the upper esophagus to the smooth muscle portion of the more distal esophagus and ultimately through the smooth muscle lower esophageal sphincter

Download English Version:

<https://daneshyari.com/en/article/3323102>

Download Persian Version:

<https://daneshyari.com/article/3323102>

[Daneshyari.com](https://daneshyari.com)