Dysphagia as a Cause of Chest Pain: An Otolaryngologist's View

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KEYWORDS

• Dysphagia • Chest pain • Differential diagnosis
• Esophagoscopy

Dysphagia is an important alarm symptom, as is chest pain. The combination of the two can pose difficulties in terms of diagnosis due to the causal relationship between the two conditions (**Fig. 1**). The main diagnosis to rule out in a patient presenting with retrosternal chest pain is a myocardial infarction, a medical emergency usually treated in the emergency department, for which no time may be wasted or lost. Patients presenting with dysphagia, that is, difficulty and pain when swallowing, must undergo a thorough clinical and diagnostic evaluation. When presenting to an otolaryngologist, the physical examination includes direct and indirect laryngoscopy in the awake and cooperative patient. Further, a rigid hypopharyngoscopy and esophagoscopy must be performed under general anesthesia, if all other possible causes for dysphagia, such as neurologic or cardiac causes, are ruled out. Dysphagia is an alarm signal, because (eg, in the case of a foreign body aspiration) it can result in the perforation of the hypopharynx, with consequent mediastinitis or pneumonia and lethal sepsis.

EPIDEMIOLOGY

Prevalence

There is a lack of studies documenting the epidemiology of dysphagia.[1] There are of course numerous patient-based reports of dysphagia being associated with

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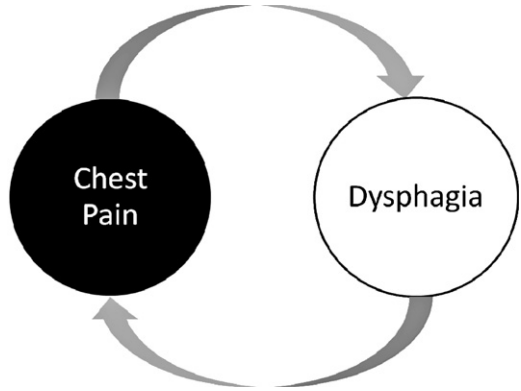

Fig. 1. The causal relationship between chest pain and dysphagia.

cerebrovascular accidents, Parkinson disease, and esophageal malignancy, to mention a few.[2,3] Population-based studies are rare, with only a few currently published.[4–8] Moreover, the estimated prevalence of dysphagia in these studies was between 6% and 22%, which is somewhat high.

A Swedish study of 2329 individuals older than 55 years found that almost one-third (27%) had esophageal dysfunction and 13% with normal esophageal function had dysphagia. No mention was made of differences in prevalence by gender, but the overall prevalence was reported as 22.3%.[4] Bloem and colleagues[5] conducted a study of 130 elderly individuals (aged >87 years) from the Netherlands and observed that 16% had symptoms of dysphagia, but that these symptoms were not associated with age, gender, or mental status. A larger study (n = 556) of 50- to 79-year-old individuals in the community reported that a very small number (1.6%) had obstructive symptoms and just over one-fifth (20.9%) had globus sensation that increased slightly with increasing age.[6] In a United States study of 1021 individuals aged 30 to 64 years, functional gastrointestinal symptoms were determined and 6% of individuals reported trouble swallowing more than a quarter of the time.[7] A Japanese study of elderly people (aged >65 years; n = 1313) living at home reported that 13.8% had symptoms of dysphagia.[8]

In a more recent population-based study that focused on dysphagia, it was determined that among an adult population 18 years and older the prevalence of dysphagia was 17%, showing a positively skewed distribution (**Fig. 2**) with high rates among younger age groups, with a peak in the 40- to 49-year age group for both males (28%) and females (34%).[9] This study was the first to assess dysphagia among younger adults in a community sample. All previous studies had assessed dysphagia among older adults, usually older than 50 years, due to the belief that it was more common in this age range; however, this finding highlighted that dysphagia is prevalent among younger individuals in the community.

Risk Factors

Risk factors associated with dysphagia have been largely unexplored. There have only been 7 studies looking at risk factors related to dysphagia, with all of these published after 2003. The main focus of these studies was spinal surgery (n = 3),[10–12] stroke (n = 1),[13] pediatrics (n = 1),[14] geriatrics (n = 1),[15] chemoradiotherapy (n = 1),[16] and dysphagia (n = 1).[9] Risk factors identified from these studies included larger radiation