

“Double Dysphagia” in an Older Female

by T. S. Dharmarajan and V. Polavarapu

The case illustrates the presentation of dysphagia at two different sites in an older female. Evaluation confirmed the presence of two etiologies, namely, extrinsic compression in the upper esophagus from osteophytes in the cervical spine and an intrinsic basis in the lower esophagus from a mucosal ring. Conservative management produced good results. Dysphagia in older adults does not occur on the basis of aging alone and warrants evaluation; it may rarely result from more than one cause.

INTRODUCTION

The word dysphagia originates from the Greek roots dys (with difficulty) and phagia (to eat) referring to the subjective sensation of difficulty in swallowing (1). Disorders of swallowing are common in the elderly and typically associated with weight loss, aspiration pneumonia and airway obstruction. Dysphagia (i.e. impaired swallowing) may involve any phase of swallowing, including the preparatory, oral, pharyngeal and esophageal phases (2). Although dysphagia is commonly encountered in the geriatric population, it nevertheless does not result solely from the aging process (3). Dysphagia may result from a variety of structural and functional abnormalities (4). Focused history and physical examination are vital initial steps

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in the diagnosis and management of swallowing disorders in the elderly.

CASE PRESENTATION

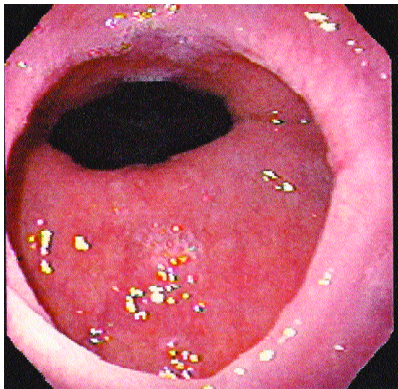
A 77-year-old African American female, a patient in the ambulatory Geriatrics Clinic of a University Hospital, has a history of long standing hypertension, type 2 diabetes mellitus with peripheral neuropathy, depression, gastroesophageal reflux disease (GERD) with hiatal hernia, transient ischemic attacks (with no residual deficits) and osteoarthritis. She is an ex-smoker. Current medications included glyburide (5 mg tab once daily), oxybutinin XL (5 mg tab once daily), multivitamins (1 tab once daily), docusate sodium (100 mg cap thrice daily), sertraline (50 mg once daily), folic acid (1 mg tab daily), clopidogrel (75 mg tab daily), calcium carbonate (250 mg tab twice daily) and acetaminophen (500 mg tabs as needed). The patient admits to long standing swallowing difficulties, associated with little to no change in weight over the prior three years. Barring the presence of a small thyroid nodule, she had no other clinical findings relevant to the dysphagia.

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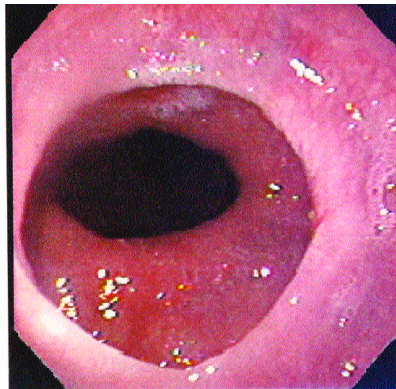
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A CASE TO REMEMBER

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2

Figures 1 and 2. Endoscopic appearance of Schatzki Ring in this individual.

Dysphagia was bothersome mainly when ingesting solids, with no difficulties encountered for liquids; the complaint became gradually progressive of late. Specifically, there appeared discomfort and rarely pain in the retrosternal (upper esophagus) and epigastric (lower esophagus) sites. Food intake, particularly larger portions and dry food, brought on the complaints. An upper gastrointestinal series revealed narrowing of the cervical esophagus, due to prominent extrinsic posterior cervical esophageal compression from osteophytes; in addition there was distal esophageal narrowing with a fixed focus of ulceration; the radiologist suggested that tumor could not be excluded. A small hiatal hernia was also present. Endoscopic evaluation by the gastroenterologist confirmed the presence of a lower esophageal ring (Schatzki ring) just above the gastroesophageal junction; as the opening of the ring was adequate, dilatation was not warranted. No abnormalities were visible in the upper- or mid-esophagus. (Figures 1 and 2)

All pertinent laboratory results were in the normal range, except for hyperglycemia, relating to diabetes and the presence of chronic anemia from thalassemia trait; her nutritional status was normal.

Based on the esophagus findings, the patient was counseled to eat her meals slowly, chew food adequately and avoid large or dry morsels of food; she was also advised to consume liquids with meals and also following the intake of medications. As her cognition was intact, she followed our recommendations and noted substantial improvement in symptoms associated with

food intake. She has had less dysphagia related complaints and enjoys her meals, with overall improvement in quality of life. No invasive procedure was ever performed.

DISCUSSION

Dysphagia is common in the geriatric population and associated with morbidity and mortality, with most consequences arising from aspiration. The prevalence of dysphagia increases with age. While the community prevalence of dysphagia may be about 10%

in people over age 50, as many as a third of nursing home residents have dysphagia (5,6,7). Further, it appears as though many patients do not ever approach the physician for help with swallowing difficulties (6).

Odynophagia refers to painful swallowing, typically as a result of inflammatory disorders of the esophageal mucosa or muscle; the most common causes of odynophagia in the elderly are pill induced esophagitis, radiation injury and infectious esophagitis (candida, herpes etc.) (8). Swallowing difficulties in the geriatric population result not only from gastrointestinal tract disorders, but also from cognitive impairment, psychiatric disorders, dental disease, dysfunction of the muscles of mastication and osteoporosis of the mandible (9). Dysphagia is traditionally classified into oropharyngeal (transfer) and esophageal (transport) dysphagia. A selection of etiologies in both categories is listed in Table 1.

Several of the causes in Table 1 deserved consideration in our patient. Evaluation confirmed the presence of the Schatzki ring, as did extrinsic compression secondary to cervical osteophytes. The thyroid nodule, although a recognized cause of dysphagia, did not seem to have a basis in this lady. It is quite possible that diabetic neuropathy (involving the esophagus), GERD with hiatal hernia and pill esophagitis (she was on nine medications) could have played a role in the development of dysphagia, but the fact that she improved with dietary counseling alone makes these factors unlikely. Figures 1 and 2 demonstrate the endoscopic appearance of Schatzki ring in our patient.

SCHATZKI RING

Templeton first reported lower esophageal rings in 1944, the rings being mostly asymptomatic (10). The association of dysphagia with lower esophageal rings was described by Ingelfinger and Kramer (11) and also by Schatzki and Gray in 1953 (12). Rings have been termed “B” for lower esophageal mucosal ring and “A” for lower esophageal muscular ring (13). The term Schatzki ring is used specifically for the lower esophageal mucosal ring that causes intermittent dysphagia, the diagnosis typically made by clinical and radiological findings (14).

Lower esophageal rings are commonly found with routine barium swallow examinations and are often asymptomatic, with 0.5% being symptomatic (14). Other reports state that Schatzki rings are commonly symptomatic (15). The rings typically occur in middle age or later, incidence increasing with age (16). Most cases occur in women and are associated with iron deficiency anemia (9). Notably, our report is in an older female who also happened to be anemic. Schatzki rings have also been an obscure cause of dysphagia in children (17). The postulated mechanisms for development of the ring include congenital basis, stricture (relating to GERD), mucosal redundancy and pill induced esophagitis (14). Data supports the pill induced theory (14,15); our patient had been on numerous medications for several years.

Clinical manifestations of Schatzki ring include intermittent dysphagia for solids, with symptoms resulting from food impaction in the esophagus. Acute substernal chest pain is typical with the patient often pointing to the level of obstruction over the anterior chest wall. Interestingly, bread and meat are most frequently reported to be the offending food items and hence the term “steakhouse syndrome” (14). The patient typically feels better following the passage of food through the ring or by inducing regurgitation. Esophageal perforation has been reported.

Schatzki rings are located at the squamo-columnar mucosal junction and are comprised of mucosa and submucosa. They are circumferential and less than 3 mms thick. Symptoms relate to the diameter of the rings, with invariable manifestations to solid food with rings less than 13 mms, variable manifestations with diameter 13 to 20 mms and hardly any for rings over

Table 1

Causes of Dysphagia in Older Adults (3,8,9)

Oropharyngeal (Transfer)

- Neuromuscular
 - Cerebrovascular disorders
 - Parkinson’s Disease
 - Extra-pyramidal syndromes (including drug related)
 - Multiple sclerosis
 - Myopathies
 - Myasthenia gravis
 - Thyroid dysfunctional disorders
 - Hypercalcemia
- Mechanical
 - Neoplasms
 - Strictures, webs
 - Extrinsic compression (e.g. osteophytes, thyroid mass)
- Miscellaneous
 - Alzheimer’s disease
 - Depression

Esophageal (Transit)

- Mechanical
 - Pill esophagitis
 - Webs
 - Rings (Schatzki)
 - Tumors
 - Strictures
 - Aneurysm
 - Diverticula
- Miscellaneous
 - Gastrointestinal reflux disease
 - Parkinson’s disease
 - Diabetes mellitus
 - Scleroderma

20 mms (13). Poorly chewed food induces symptoms; however, most patients are asymptomatic. Drooling of saliva is a rare feature.

Barium esophagography is the preferred means of diagnosis, the procedure ideally performed in the prone position. Endoscopy not only visualizes the ring but also provides opportunity for histologic confirmation. In our patient, the barium contrast study was not conclusive, while endoscopy confirmed the diagnosis.

Cervical osteoarthritis is an important but rare cause of dysphagia from extrinsic compression in the

Table 2
Schatzki Ring: A Summary

Prevalence

- Increases with age, more after middle age

Location

- Esophagogastric junction

Features

- Most cases are asymptomatic
- Substernal chest pain is typical
- Intermittent dysphagia for solids
- Acute food impaction is rare

Diagnosis

- Barium swallow, videofluoroscopy
- Confirmation by endoscopy

Treatment

- If asymptomatic: no intervention
- If symptomatic, suggest:
 - adequate chewing of food
 - take time to eat (avoid hurry)
 - consume fluids with meals and medications
- If symptoms are progressive, dilatation

elderly; most manifestations of cervical osteoarthritis are other than dysphagia. Hypertrophic spurs from the anterior aspect of the cervical spine give the sensation of a foreign body in the esophagus, with dysphagia mainly to solids (9). Diagnosis is made by x-rays of the cervical spine or lateral barium swallow views, the latter utilized in our case. Cervical osteophytes should not be accepted as the basis for dysphagia until other causes are excluded (18).

Careful chewing of food and avoiding eating in a hasty manner may suffice when symptoms from Schatzki ring are not bothersome. Besides counseling with regards to dietary measures, in individuals where the dysphagia is severe and / or progressive, definitive correction involves esophageal dilatation with a large-caliber bougie. If standard bougienage is unsuccessful, incision of the ring by electrocautery or laser is an alternative (9). Potential complications include perforation, bleeding and stricture development with repeated dilatation (14). Recurrence of the ring following dilatation is known to occur.

CONCLUSION

The case illustrates “double dysphagia” in an older female; two causes for dysphagia were identified in the individual, explaining manifestations at different sites. Focused history is a key to determining the etiology of dysphagia; good results may be obtained with conservative measures and counseling as demonstrated here. Dysphagia in the geriatric population always warrants evaluation. ■

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