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CLINIC CASE

Severe achalasia as a reversible cause of dysphagia in an oncological nonagenarian patient: A case report

Acalasia severa como causa reversible de disfagia en paciente nonagenaria oncológica

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Achalasia (AC) is the most common primary motility disorder in the esophagus, characterized by abnormal cholinergic stimulation of the smooth muscle and the lower esophageal sphincter (LES), leading to neuronal degeneration of the myenteric plexus and consequent impairment in LES relaxation, resulting in associated aperistalsis. Its etiology is not well understood, but according to some studies, autoimmune mechanisms and viral infections could be implicated.[1,2] The prevalence of AC is 10 cases per 100,000 inhabitants, affecting both sexes equally and without racial predilection.[3] While its diagnosis is more frequent between the third and sixth decades of life, its incidence increases with age. However, there is underdiagnosis among the elderly, as it often presents as chronic digestive symptoms or malnutrition problems that frequently go unnoticed, leading to delayed diagnosis and worsening prognosis.[4]

We present the case of a 90-year-old woman with an excellent baseline functional status (Barthel index 85) and no cognitive impairment, with a recent diagnosis of rectal adenocarcinoma with hepatic metastases, without specific oncological treatment. She was admitted to the Acute Geriatric Unit of Hospital Universitario de Navarra (Pamplona, Spain) due to a three-month history of deteriorating general condition, including progressive weight loss (approximately 6 kg), epigastric pain, and difficulty in swallowing. In recent weeks, she had also experienced food regurgitation, inability to tolerate oral intake, low-grade fever, cough and expectoration. A chest X-ray showed a left basal infiltrate, and blood tests revealed hemoglobin of 10.8 g/dL, white blood cells 11.8×10^9/L, neutrophils 9.9×10^9/L, and C-reactive protein 17 mg/L (normal range 0–5), indicating probable aspirative pneumonia. Antibiotic treatment with amoxicillin–clavulanic acid was initiated, successfully. Due to the initial suspicion of possible intestinal obstruction given her underlying oncological disease, an abdominal CT scan was conducted, ruling out mechanical obstruction. Detailed medical history with the patient and family revealed mixed dysphagia for the past 13 years, progressively worsening, with a sensation of retrosternal stoppage during intake, food impactions, and intense epigastric pain when food reached the stomach. To assess the upper digestive tract's proper functioning, a barium swallow esophagram was performed, confirming a motor esophageal disorder consistent with AC, displaying a sigmoid-shaped, aperistaltic esophagus, as shown in Fig. 1. As the patient could not tolerate liquids or solids, the Endocrinology Service initiated parenteral nutrition due to the inability to pass a nasogastric tube through the cardia due to esophagogastric junction (EGJ) stenosis. Simultaneously, a consultation with the Gastroenterology Service was made, and considering the patient's age, comorbidities, and baseline status, a botulinum toxin injection was performed via gastroscopy at the EGJ. The procedure went smoothly, and the patient was able to tolerate oral intake of liquids and solids within 48 h, leading to the discontinuation of parenteral nutrition. Two days later, the patient was discharged home, where she continues to maintain adequate intake and is asymptomatic from a digestive perspective.

Dysphagia is a common pathology among elderly and palliative patients that requires a holistic approach. A thorough medical history is essential to identify the origin of dysphagia and differentiate between oropharyngeal and esophageal dysphagia. In the latter case, imaging tests such as CT scans or endoscopy should be performed to rule out extra-esophageal or esophageal obstructive causes at the EGJ, such as tumors, infections, inflammatory processes, or esophageal rings. When an esophageal motility disorder is suspected, the gold standard diagnostic test is high-resolution manometry (HRM), which would reveal elevated relaxation pressure and absence of normal peristalsis. However, a barium swallow esophagram can also be performed to assess esophageal emptying and EGJ morphology.[5]

AC has an insidious onset and gradual progression over years, leading to delayed diagnosis as a significant portion of classic symptoms go unnoticed, including mixed dysphagia to solids (91%) and

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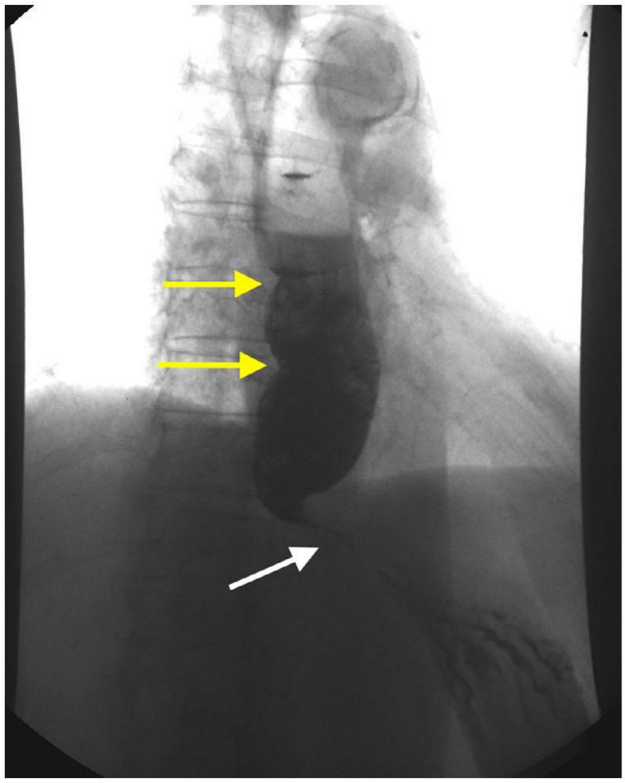

Fig. 1. Esophagogram showing esophageal dilation with multiple curves preventing proper barium transit, referred to as «sigmoid-shaped esophagus» (yellow arrows) and tapering of the distal esophagogastric junction forming the «bird's beak sign» (white arrow).

liquids (85%), regurgitation of saliva or undigested food (76–91%), chest pain with retrosternal burning sensation (40–60%), and gradual weight loss due to decreased intake.[6] According to the confirmation diagnosis through HRM or esophagram, AC is classified into three types. Type I (classic AC) presents with absent peristalsis, type II replaces peristalsis with pressurizations along the entire esophagus, and type III (spastic AC) is characterized by spastic or premature contractions.[7] This classification not only helps understand the underlying mechanisms of the disease but also guides targeted treatment.[8] While types I and II can be treated with pneumatic dilation (PD), laparoscopic Heller myotomy (LHM), or peroral endoscopic myotomy (POEM), type III is only treated with POEM.[9] Botulinum toxin was the most commonly used technique in the past and, although replaced by more effective and long-lasting procedures, it remains the safest option, being minimally invasive (complication rates are low and generally mild, such as epigastric/chest pain or reflux). Currently, it is reserved for palliative patients or frail elderly with high comorbidity who are not candidates for invasive or surgical procedures. Although the recurrence rate is 60% annually, it can be repeated on subsequent occasions.[10]

In conclusion, AC should be considered in the differential diagnosis of dysphagia in the elderly, as it represents a potentially modifiable cause, even in patients receiving palliative care. Through a minimally invasive procedure, their symptoms and quality of life can be significantly improved.

Informed consent

The authors declare that they have obtained the patient's consent.

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Conflict of interests

There is no conflict of interest.

References

1. Spechler SJ, Konda V, Souza R. Can eosinophilic esophagitis cause achalasia and other esophageal motility disorders? Am J Gastroenterol. 2018;113:1594–9, http://dx.doi.org/10.1038/s41395-018-0240-3.
2. Facco M, Brun P, Baesso I, Costantini M, Rizzetto C, Berto A, et al. T cells in the myenteric plexus of achalasia patients show a skewed TCR repertoire and react to HSV-1 antigens. Am J Gastroenterol. 2008;103:1598–609, http://dx.doi.org/10.1111/j.1572-0241.2008.01956.x.
3. Carlson DA, Gregory DL, Gawel SH, Pandolfino JE, Kahrilas PJ. Incidende and prevalence of achalasia in Central Chicago, 2004–2014, since the widespread use of High-Resolution Manometry. Clin Gastroenterol Hepatol. 2017;15:366–73, http://dx.doi.org/10.1016/j.cgh.2016.08.030.
4. Chan MQ, Balasubramanian G. Esophageal dysphagia in the elderly. Curr Treat Opt Gastroenterol. 2019;17:534–53, http://dx.doi.org/10.1007/s11938-019-00264-z.
5. Mari A, Sbeit W, Abboud W, Awadie H, Khoury T. Achalasia in the elderly: diagnostic approach and a proposed treatment algorithm based on a comprehensive literature review. J Clin Med. 2021;10, http://dx.doi.org/10.3390/jcm10235565.
6. Pandolfino JE, Gawron AJ. Achalasia: a systematic review. J Am Med Assoc. 2015;313:1841–52, http://dx.doi.org/10.1001/jama.2015.2996.
7. Yadlapati R, Kahrilas PJ, Fox MR, Bredenoord AJ, Gyawali P, Roman S, et al. Esophageal motility disorders on high-resolution manometry: Chicago classification version 4.0©. Neurogastroenterol Motil. 2021;33:1–21, http://dx.doi.org/10.1111/nmo.14058.
8. Vaezi MF, Pandolfino JE, Yadlapati RH, Greer KB, Kavitt RT, et al. ACG clinical guidelines: diagnosis and management of achalasia. Am J Gastroenterol. 2020;115:1393–411, http://dx.doi.org/10.14309/ajg.0000000000000731.
9. Oude Nijhuis RAB, Prins LI, Mostafavi N, van Etten-Jamaludin FS, Smout AJPM, Bredenoord AJ. Factors associated with achalasia treatment outcomes: systematic review and meta-analysis. Clin Gastroenterol Hepatol. 2020;18:1442–53, http://dx.doi.org/10.1016/j.cgh.2019.10.008.
10. Sterling JL, Schey R, Malik Z. The role of botulinum toxin injections for esophageal motility disorders. Curr Treat Opt Gastroenterol. 2018;16:528–40, http://dx.doi.org/10.1007/s11938-018-0212-0.