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DIAGNOSTIC ISSUES OF DYSPHAGIA IN A FRAIL 72-YEAR OLD PATIENT

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Abstract. Dysphagia represents the abnormality of swallowing in the upper gastrointestinal tract, including the dysfunction of coordination between the respiratory and nutritional function, which can cause many complications such as dehydration, malnutrition, aspiration pneumonia, suffocation and death especially in a frail patient. Its prevalence is very high and it is even greater when it is related to dementia. We present the case of a 72-year old patient with atrial fibrilation, NYHA class II heart failure with preserved ejection fraction, secondary pulmonary hypertension, chronic obstructive pulmonary disease (COPD), imaging stationary bilateral fibronodular opacities, who manifests mainly with dyspnea at moderate exertion and selective dysphagia for fluids and solids associated with chronic cough with high intensity. The differential diagnosis offers the possibilities of an exacerbation of COPD, a tumor in the mediastinum, a possible esophageal stricture, an eso-bronchial fistula. The positive diagnosis was eso-bronchial fistula after the barium transit examination. To exclude the possibility of neoplasia it was still necessary to continue investigations with chest CT and gastroenterological consultation, recommendations at discharge. Dysphagia is a nonspecific symptom that can be the cause of many diseases in the elderly, fragile patients. Like many other nonspecific symptoms in elderly, we should investigate all the possible causes well, with pluridisciplinarity consults and appropriate investigations.
Key words: dysfagia, frailty, differential diagnostic, elderly patient

Rezumat. Disfagia reprezintă anomalia de deglutiție în tractul gastrointestinal superior, inclusiv disfuncția coordonării dintre funcția respiratorie și cea nutrițională, care poate fi cauza a numeroase complicații precum deshidratare, malnutriție, pneumonie de aspirație, sufocare și deces, în special la un pacient fragil. Prevalența sa este foarte mare și este și mai mare atunci când este legată de demență. Prezentăm cazul unui pacient de 72 de ani cu fibrilație atrială, insuficiență cardiacă clasa II NYHA cu fracție de ejecție conservată, hipertensiune pulmonară secundară, bronhopneumopatie obstructivă cronică (BPOC), imagistică opacități fibronodulare bilaterale staționare, care se manifestă în principal cu dispnee la efort moderat și disfagie selectivă pentru lichide și solide asociate cu tuse cronică de intensitate mare. Diagnosticul diferenţial oferă posibilităţi de exacerbare a BPOC, o tumoră în mediastin, o posibilă strictură esofagiană, o fistulă eso-bronșică. Diagnosticul pozitiv a fost fistula eso-bronșică după examenul de tranzit cu bariu. Pentru a exclude posibilitatea neoplaziei a fost necesară continuarea investigațiilor cu CT toracic și consult gastroenterologic, recomandări la externare. Disfagia este un simptom nespecific care poate fi cauza multor boli la pacienții vârstnici, fragili. Ca multe alte simptome nespecifice la vârstnici, ar trebui să investigăm bine toate cauzele posibile, prin consultații pluridisciplinare şi investigații adecvate.
Cuvinte cheie: disfagie, fragilitate, diagnostic diferenţial, pacient vârstnic

INTRODUCTION

Dysphagia is a common problem in the elderly, which can be the manifestation of a wide group of diseases, which requires special attention of the clinician in evaluating a patient with such an issue. Dysphagia, according to the etymology of the word, refers to the difficulty of swallowing. Anatomically, it is classified as oropharyngeal dysphagia and esophageal dysphagia. From the point of view of the etiology, it can be either due to a mechanical cause or due to a motor dysfunction. The phenomenon of swallowing involves over 30 nerves and muscles, which implies that although seemingly simple, there are many essential elements in carrying out this process, which gives it fragility, and can be altered in several links. As we know, normal aging involves progressive brain atrophy, which gradually leads to damage to the brain structures responsible for swallowing, as well as a slight atrophy of the muscles [1].

CASE-STUDY ANAMNESIS

We present the case of a 72-year-old patient who came to our clinic for dyspnea at moderate exertion, fatigue, fixation hypomnesia, selective dysphagia for fluids and solids, chronic cough.

From his personal medical history we mention atrial fibrillation with medium heart rate, NYHA class II heart failure with preserved ejection fraction, secondary pulmonary hypertension, COPD, imaging stationary bilateral fibronodular opacities evaluated periodically with CT examination in 2017, 2018 and 2019, diffuse osteoporosis with fracture by objective T5-level compaction at the MRI examination in 2017, without DXA investigation, data provided from a medical letter from 2018, spondylodiscarthrosis (MRI 2017), cerebral atrophy exceeding the age limit (MRI 2017).

From the background medication we mention the treatment with acenocoumarol, metoprolol 100mg/day, furosemide 40m /day, spironolactone 25mg/day, Alpha D3 1mcg/day, atorvastatin 20mg/day, donepezil 10mg/day, memantine 10mg/day.

THOROUGH ASSESSMENT

a) Regarding the **objective examination** we mention dehydration, pale skin, venectasias at the level of the lower limbs, bilateral, cracking during passive mobilization of the large joints, kyphoscoliotic thorax, bilateral basal crackles (left> right), BP = 105 / 70mmHg, HR = 79b/min, irregular, arrhythmic heart sounds, inequidistant, inequipotent, without detectable auscultatory murmurs, Romberg present unsystematized, left eye blindness.

b) **Serum and urinary biochemical parameters**: leukocytosis (10.8 * 103/μL), neutrophilia (7.09 * 103/μL), increased fibrinogen (460mg/dl), increased ESR (33mm/h), slightly low serum potassium (3.4mmol/l -> 3.6mmol/l -> 3.50mmol/l), creatinine 1 mg/dl at admission, then 0.82mg/dl, respectively 0.78mg/dl. In the urine summary there have been present leukocytes 500/ μL, and also proteins present. Urinary sediment showed very fine traces of protein, frequent leukocytes, relatively common microbial flora, frequent flat epithelial cells and very rare round epithelial cells. Since the urine summary and the urinary sediment have been modified, we performed the urine culture where Enterobacter Aerogenes was identified, but because the patient did not present any urinary symptoms, we decided to refrain from initiating the antibiotic treatment.

c) **Abdominal and thyroid ultrasound** showed no significant changes.

d) **DXA examination** confirmed the diagnosis of osteoporosis.

e) The **ophthalmologic examination** found the eye as the only functional and compound myopic astigmatism for which treatment with eye drops with artificial tears, dorzolamide/ timolol solution and bimatoprost was recommended.

f) **Psychological consultation** found moderate mnemonic efficiency, slight deficit of concentration, moderate deficit of abstraction, deficit of integration of elements, moderate capacity for visual organization, deficit of long- and medium-term recall, moderate difficulty of concentration. The MMSE exam was 23/30p, the Clock Drawing Test was 5/10p, and the Geriatric Scale of Depression was 2/15p.

g) The **EKG** showed atrial fibrillation, VR = 84 / min, hypovoltage in the frontal leads, where T waves were flattened diffusely. Cardiological examination with **echocardiography** examination found mild to moderate mitral regurgitation, severe tricuspid regurgitation, probable secondary PAH (pulmonary hypertension), permanent FiA with moderate VR. Because low blood pressure values (TAS below 100mmHg) were found during hospitalization, associated with postural instability and the diagnosis of osteoporosis, the dose of furosemide was reduced from 40mg/day to 20mg twice a

week, blood pressure returning to normal limits, the symptoms improving and reducing the risk of falling and implicitly the occurrence of fractures.

DIFFERENTIAL DIAGNOSIS

Selective dysphagia for solids and fluids associated with chronic cough with high intensity, that isn't probable due to chronic bronchitis in the presence of an exacerbation of chronic obstructive pulmonary disease, has posed the following problems in the differential diagnosis [1]:

- An **exacerbation of COPD**, which is still unlikely, because from a clinical point of view we would have expected an increase in sputum production with colour change, suggestive of a super infection and chest X-ray only enlarged heart in both diameters, fibrous sequel in the bilateral upper lung lobes, linear opacity, probably sequel, right basal, symphysed right costo-diaphragmatic sinus, diminished pulmonary transparency with benign left basal appearance; to re-evaluate this associated pathology, it is recommended to perform a spirometry, but we could not perform it, due to the presence of the COVID pandemic19 [2-4].
- The presence of an **eso-bronchial fistula**, which is the cause for food to enter the respiratory tract, thus triggering cough and dysphagia being justified [5];
- A possible **esophageal stricture**, but they generally occur in patients with gastroesophageal reflux disease, or with another cause of esophageal injury [6];
- A **tumor in the mediastinum**, this can be highlighted at a radiological examination, but in general in this context dysphagia is selective for solids [7-9];
- **Diffuse idiopathic esophageal spasms**, unlikely due to the severity of symptoms;
- **Esophageal achalasia**, the clinical picture being suggestive, although the burning pain that appears in this pathology is missing, due to the regurgitation of gastric juice [10];
- **Scleroderma**, unlikely, although possible, not having many elements from the specific clinical picture of this pathology: Raynaud's phenomenon, telangiectasia, palpitations, gastroesophageal reflux disease [11].

The positive diagnosis was imposed by the barium transit, examination revealed the presence of an eso-bronchial fistula (Fig. 1 and Fig. 2).

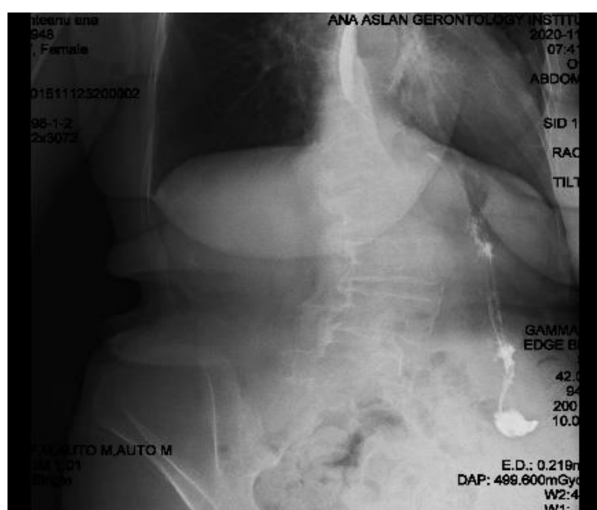

Fig. 1 Eso-bronchial fistula

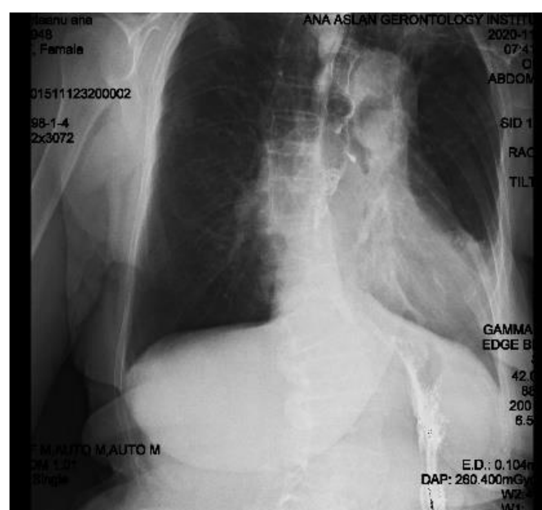

Fig. 2 Eso-bronchial fistula

The patient was discharged with improved symptoms after hospital treatment, but it is still necessary to continue investigations with chest CT and gastroenterological consultation for a more accurate diagnosis and the establishment of therapeutic conduct, as at present we cannot eliminate the possibility of a neoplasia.

CONCLUSIONS

The peculiarity of this case is to evaluate the possible causes of a nonspecific symptomatology, dysphagia, in an elderly, fragile patient. The more advanced the frailty is and the older the patient is, the more untypical the pathologies manifest, and the clinical reasoning must be as wide as possible, there should be more questions in anamnesis, and it should also be more investigations effectuated.

Conflicts of interest

The authors declare no conflicts of interest.

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