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Zenker Diverticle: Case Report and Review of the Literature

Mohamed Aziz Fadili¹, Youssef El Mahdaoui¹, Youssef El Yacoubi¹, Mbarek Yaka^{1,2}, Abdelkader Ehrichiou^{1,2},
Abdelmounaim Ait Ali^{1,2}, Aziz Zentar^{1,2}

¹Mohammed V military teaching hospital, General surgery department.

²Mohammed V university, faculty of medicine Rabat.

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ABSTRACT

We report a clinical case of a rare entity, the zenker's diverticulum, discovered in a young man, we present the clinical dilemma and the management challenge.

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Introduction

ZENKER's diverticulum is a pharyngo-esophageal diverticulum which, despite their rarity constitutes 70% of esophageal diverticula against 10% medi-thoracic and 20% epithrenic. It is defined by a pathological cavity communicating with the light of the esophagus by an orifice more or less wide: Le Collet. It is an acquired hernia of the mucosa or sometimes of the entire posterior median esophageal wall which develops at the level of a high pressure area of the upper sphincter of the esophagus at the height of the KILLIAN triangle between the upper edge of the muscle. crico-pharyngeal and the lower constrictor of the pharynx. (1)

It is a pathology which mainly affects the elderly. Patients can be asymptomatic, symptoms such as regurgitation and dysphagia appear as well as complications such as high occlusions and severe undernutrition are described, degeneration is exceptional.

The diagnosis is based on radiology based on the clouding of the esophagus. The treatment is mainly surgical by a diverticulectomy associated with a crico-pharyngo-esophageal myotomy, the endoscopic treatment by diverticulopexy is impractical. The evolution after surgical treatment is very good.

Materials and Methods

We present in this article the experience of the Department of Visceral Surgery II of the MOHAMED V - RABAT MILITARY TEACHING I HOSPITAL through a ZENKER diverticulum case report underwent surgery in 2018:

Observation

A 46-year-old Moroccan man, without any particular ATCD, hospitalized in October 2018 in the visceral surgery department for dysphagia. He complained of solid dysphagia then became mixed evolving for 2 years of progressive worsening associated with gastroesophageal reflux.

The clinical examination on admission found a patient in good general condition. Endoscopic exploration (FOGD) showed the presence of large latero-esophageal diverticulum with an uncomplicated hiatal hernia associated with chronic gastritis. The eso-gastro-duodenal transit (TOGD) showed an image of addition located at the posterior part of the upper third of the esophagus thus confirming the diagnosis of Zenker's diverticulum (fig. 1).

The intervention was carried out under general anesthesia with DD, SNG in place. We performed a left cervicotomy (fig. 3). Resection of the diverticulum at its base was performed by approaching the cervical esophagus (fig. 2) with GIA 75 resection forceps, hemostasis then FPPP and placement of a dressing, the operation lasted 1h 15min.

The immediate post-operative follow-up was simple. A follow-up barium radiography was performed the next day (fig. 4). The patient was seen again 1 month later, the evolution was favorable.

The average time between the onset of symptoms and the intervention was 2 years.

The main symptom encountered was dysphagia, present in both patients. It was associated with GERD in the first case and associated with neck pain in the second case.

The second patient alone presented complications linked to the development of the diverticulum, such as weight loss, dyspnea and extreme dysphagia (aphagia) which led to a state of dehydration.

The diagnosis of Zenker's diverticulum was made by performing TOGD in the 2 cases. Fibroscopy was also performed in all cases but did not contribute in the second patient due to the size of the diverticulum and a CT scan was done in this same patient then confirmed the diagnosis.

No intraoperative complications were reported and there were no deaths during the hospitalization period.

The operative suites were simple. For remote monitoring, all patients were reviewed 1 month after the intervention without any complications.

An anatomico-pathological examination was performed each time. No carcinoma was found in our series.

Discussion

In 1769 Ludlow Abraham first described the pharyngoesophageal diverticulum. But it was not until 1877 that Zenker and Ziemssen published a series of 27 patients with this pathology (2) concluding that it is linked to an intra-pharyngeal hyperpressure. A century later, a manometric study demonstrated the role of the upper esophageal sphincter in pathogenesis.

ZENKER's diverticulum develops at a high pressure area of the upper esophageal sphincter at the height of the KILLIAN triangle between the upper edge of the cricopharyngeal muscle and the lower constrictor of the pharynx. A correlation has been suggested between the position of the ZD and the laterality of the patients (right-handers would mainly develop diverticula on the left side), but there is no clear pathophysiological explanation for this predominance left (2).

Pathogenesis include incoordination at the time of swallowing of the pharyngeal muscles and Cricopharyngeal muscle, the lack of relaxation of the Superior oesophagus sphincter of neurological or intrinsic origin, the spasm of Cricopharyngeal muscle, the parietal anatomical weaknesses, the lack of compliance of the Superior oesophagus sphincter, the possible role of gastroesophageal reflux (3). Depending on the size of the diverticulum, there are 3 stages

A: mucous protrusion

B: horizontal development

C: development parallel to the esophagus which is gradually pushed back forward

It is a pathology of the subject aged over 60, rarely under 40, with a prevalence reaching 0.11% of the general population, a sex ratio of 2.6 to 3.4 predominant in the white race (long neck) (3). We have collected 2 cases in 8 months, one of which is the subject of this publication, which testifies to the rarity of this pathology which mainly affects the elderly and what agrees with the literature.

Studies report the association of the hypopharyngeal diverticulum with the hiatal hernia which is probably explained by the disease of GERD which weakens the esophagus longitudinally (4).

Dysphagia represents the main symptom and can be associated with other signs such as regurgitation, cough, Fetidity of the breath, hyper sialorrhea, false routes, dysphonia with hoarseness of the voice, odynophagia and sometimes palpation left latero-cervical d'a gurgling mass.

The digestive manifestations are dominant (70%), the dysphagia is high with a feeling of "lump in the throat", is complicated afterwards by blockages of the solids then even an aphagia leading to malnutrition(3). Respiratory manifestations are less frequent (20). These signs were found in our two patients. ZENKER's diverticulum is asymptomatic and incidentally discovered in 15 to 20% of cases.

The barium esophageal transit constitutes the first-line examination allowing the diagnosis to be made according to a Van Overbeek classification.

Eso-gastro-duodenal fibroscopy to exclude intradiverticular malignancy, estimated in 0.4—1.5% of patients, and to look for other associated esophageal disorders (2).

The cervico-thoracic scanner is rarely performed to identify a Zenker's diverticulum. On the other hand, it is useful in the event of complications, such as an abscess, diverticulitis or a neoplastic transplant (5).

The only indication for manometric exploration is a Lahey stage I diverticulum. with clinical manifestations of diverticulum without constituted diverticular formation, in order to identify a possible hypertonia of the cricopharyngeal for a myotomy of this muscle (6).

The videofibrosopic study looks for the sign of the specific "tide" of ZENKER's diverticulum (7).

The treatment of zenker's diverticulum is based on surgery consisting of a diverticulectomy by linear forceps, associated or not with a myotomy. (3,6)

Conclusion

Zenker's diverticulum mainly affects the elderly, sometimes the young, as in our clinical case. Patients may be asymptomatic; in view of the rarity of this pathology, clinical and paraclinical diagnosis should be mentioned. Surgery is the cornerstone of care, with a good prognosis since degeneration is exceptional.

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