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CASE REPORT

ESOPHAGEAL FOREIGN BODY IMPACTION AS A PRESENTATION OF UNDERLYING EOSINOPHILIC ESOPHAGITIS

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Abstract

Introduction. Eosinophilic esophagitis (EoE) is a rare pathology characterized by chronic inflammation with mucosal eosinophilic infiltrate of the esophagus. The clinical symptoms vary according to the age group, from recurrent abdominal and thoracic pain, vomiting, dysphagia, food impaction and gastroesophageal reflux symptoms refractory to treatment with proton pump inhibitors. In the recent years, different studies suggest that EoE is now the leading cause of food impaction in the adult population.
Case presentation. A 30-year-old female, without a pathological personal history, was admitted with symptoms of esophageal food impaction. Upper endoscopy revealed esophageal rings and the bolus impacted in the lower esophagus. Biopsy samples were obtained from several different locations, including areas away from the site of food impaction. Histopathologic examination revealed esophageal mucosal eosinophilic infiltrate >15 eosinophils per high-power field. Proton pump inhibitor (PPI) therapy, twice-daily dosing for 8 weeks was administered, as the first line treatment.
Conclusions. Consensus guidelines for the diagnosis of EoE require symptoms of esophageal dysfunction,

Résumé

Impaction alimentaire oesophagienne se présentant comme une oesophagite éosinophile sous-jacente

Introduction. L'œsophagite éosinophilique (EoE) est une pathologie rare caractérisée par une inflammation chronique avec infiltration éosinophilique des muqueuses de l'œsophage. Les symptômes cliniques varient selon les groupes d'âge: douleur abdominale et thoracique récurrente, vomissements, dysphagie, impaction alimentaire et reflux gastro-œsophagien réfractaire au traitement par inhibiteurs de la pompe à protons. Au cours des dernières années, différentes études suggèrent que l'EoE est désormais la principale cause d'impaction alimentaire chez la population adulte.
Présentation du cas. Une femme âgée de 30 ans, sans antécédents personnels pathologiques, a été admise avec des symptômes d'impaction alimentaire œsophagienne. L'endoscopie supérieure a révélé des anneaux œsophagiens et le bolus touché dans le bas de l'œsophage. Des échantillons de biopsie ont été obtenus à plusieurs endroits différents, y compris dans des zones éloignées du site de l'impaction alimentaire. L'examen histopathologique a révélé un infiltrat

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15 or more eosinophils per high-power field on microscopic examination of esophageal biopsy after 8 weeks on a high-dose proton pump inhibitor (PPI), and the absence of alternative causes of eosinophilia.

Keywords: eosinophilic esophagitis, endoscopy, food impaction, dysphagia.

éosinophilique de la muqueuse œsophagienne > 15 éosinophiles par champ de forte puissance. Un traitement par inhibiteurs de la pompe à protons (IPP), administré deux fois par jour pendant 8 semaines, a été administré à première intention.
Conclusions. Les directives consensuelles exigent des symptômes de dysfonctionnement œsophagien, 15 éosinophiles ou plus par champ de haute puissance lors de l'examen microscopique de la biopsie œsophagienne après 8 semaines d'inhibiteur de la pompe à protons (IPP) à haute dose, et l'absence de causes alternatives d'éosinophilie.

Mots-clés: œsophagite à éosinophiles, endoscopie, impaction alimentaire, dysphagie.

Introduction

Eosinophilic esophagitis (EoE) is an inflammatory disease characterized by eosinophilic infiltration of the esophageal mucosa[1,2]. The first case of eosinophilic inflammation was described by Dobbins in 1977[3]; however, until 1993, EoE was not defined as a pathology clinically different from the rest of the eosinophilic diseases of the gastrointestinal tract[4]. Despite the existence of few epidemiological data on the prevalence and incidence of EoE, the number of diagnosed cases has increased in recent years, probably due to the improvement in the knowledge of the disease[5]. The average age of development in children is between 7 and 10 years, and in adults between 30 and 40 years.[6] The pathophysiology is not entirely clear; however, there is an extensive knowledge that supports EoE as an immune-allergic alteration, possibly caused by food allergens.[7] Esophageal foreign body is more of a frequent pediatric presentation due to an underlying (EoE). In the past years eosinophilic esophagitis is increasingly being recognized as a background in a number of diseases and the interpretation of this pathology mostly depends on the clinical context in which it was obtained. The symptoms vary according to the age group, from recurrent abdominal and thoracic pain, vomiting, dysphagia, food impaction and heartburn, to developmental delay in children and gastroesophageal reflux symptoms refractory to treatment with proton pump inhibitors[8,9]. In the recent years, different studies suggest that EoE is now the leading cause of food impaction in adult population[10,11]. We present the clinical case of an adult patient with symptoms of esophageal bolus impaction, with acute dysphagia and mild chest pain, in whom flexible upper endoscopy revealed esophageal bolus impaction.

Case presentation

A 30 yo female, without pathological personal history, was admitted with symptoms of esophageal bolus impaction: acute dysphagia, mild chest pain, foreign-body sensation. During history, the patient revealed a similar episode approximately 5 years ago. Upper digestive endoscopy revealed bolus impaction (meat with fish bones) in the lower esophagus. During endoscopy, esophageal rings were observed (Fig. 1), along with the impacted bolus, which was advanced gently into the stomach with the flexible endoscope, without immediate complications. After the procedure, the patient no longer had a foreign-body sensation in the esophagus, but a strong epigastric pain. The emergency chest radiography detected subdiaphragmatic free gas on the right side and the patient was admitted to the hospital with the suspicion of esophageal perforation. Blood tests revealed inflammatory syndrome, with a C-reactive protein of 216 U/mL and marked leukocytosis with neutrophilia. The patient developed fever in the next 24 hours. Chest computed tomography was performed, which revealed right pneumoperitoneum and subcutaneous emphysema. Conservative treatment was adopted, with a favorable evolution. During the hospitalisation, after the spontaneous resolution of the pneumoperitoneum and subcutaneous emphysema, biopsy samples (Fig. 2) were obtained from several different locations, including areas away from the site of food impaction. Histopathological findings revealed esophageal mucosal eosinophilic infiltrate >15 eosinophils per high-power field. Proton pump inhibitor (PPI) therapy, twice-daily dosing for 8 weeks, was administered along with dietary restrictions and skin sensitivity tests for food and pneumo-allergens. Upper endoscopy, along with multiple biopsy samples, will be repeated after the 8 weeks trial. If neither

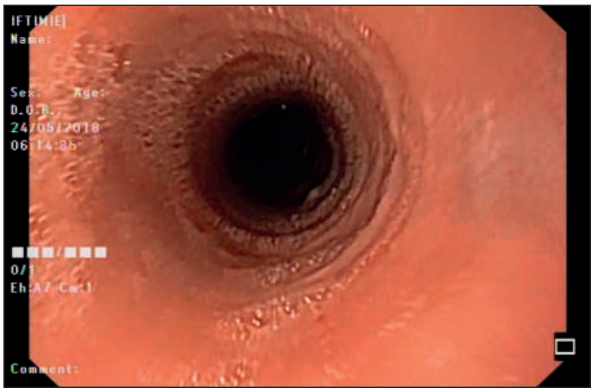

Fig. 1. Esophageal rings revealed at upper endoscopy

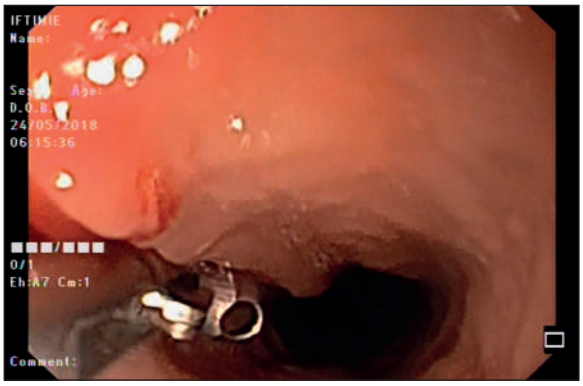

Fig. 2. Multiple biopsy samples taken along the length of the esophagus

symptoms nor histology improve, the diagnosis of EoE is confirmed and the PPI treatment discontinued and replaced by topical corticosteroids.

Discussion

EoE is a rare pathology, characterized by inflammation with an eosinophilic infiltrate of the esophagus, without gastroesophageal reflux. The pathophysiology is not yet fully established. There are several theories that relate endogenous and environmental factors[12]. Based on the results of several studies, two types of mechanisms were observed: one dependent on IgE, or extrinsic, in relation to the atopic predisposition, the high serum IgE values and the high percentage of patients positive for intradermal sensitivity tests; and another, independent of IgE, or intrinsic, in association with a high percentage of patients with positive epicutaneous tests not dependent on IgE, in which it is believed that T lymphocytes play a fundamental role[13]. Skin sensitivity tests for food and for pneumo-allergens help identify allergens and the atopic status of patients with EoE[14]. The immune-allergic mechanism can be triggered in the esophagus, in the bronchi or even in the skin. The most frequent clinical manifestations vary according to the age group. The most common endoscopic findings are: linear esophageal grooves, esophageal rings, whitish granulation and esophageal stenosis, in some cases the mucosa appears pale, congested, or has decreased vascularity[15]. The whitish plaques are associated with the finding of eosinophilic micro abscesses and areas of high density of eosinophilic infiltrate or can mimic candida[16]. The diagnosis of EoE should be suspected based on clinical characteristics and endoscopic findings. However, definitive confirmation must be anatomopathological; the presence of more than 15 eosinophils per high-power field is the definitive diagnostic criteria[17]. The differential diagnosis should be done with gastroesophageal reflux disease, because it also increases the number of esophageal eosinophils; however, the increase is never greater than 10 eosinophils per high-power field[18]. This increase occurs mainly in the distal esophageal. Currently, there is no definitive treatment for EoE. Some studies have used topical corticosteroids, such as fluticasone propionate at a dose of 220 mcg (2-4 puffs swallowed every 12 hours) for 4-6 weeks[19]. Systemic corticosteroids, such as methylprednisolone, in doses of 0.5-1 mg/kg for 6 consecutive months, with a progressive descending regimen, are an alternative. Other medical therapies include the use of montelukast, with which an improvement of the symptoms is observed but not of the histology, in addition to an early relapse after its interruption. Patients with stenotic lesions will require endoscopic esophageal dilatations[20]. Other studies have been conducted with mepolizumab, a biological anti-IL-5 agent, which is administered in a 3-monthly infusions of 10 mg/ kg[21].

Conclusions

EoE is an increasingly important cause of dysphagia and food impaction in adults. There are multiple characteristic endoscopic findings in EoE, but these endoscopic findings are also not specific for diagnosis of EoE. It is recommended that esophageal biopsies should be obtained in all patients suspected of having EoE, including all patients who undergo upper endoscopic evaluation for dysphagia or food impaction, regardless of the endoscopic appearance or findings. Consensus guidelines require symptoms of esophageal dysfunction, 15 or more eosinophils per high-power field on microscopic examination of esophageal biopsy after 8 weeks on a high-dose proton pump inhibitor (PPI), and the absence of alternative causes of eosinophilia[22,23].

Compliance with Ethics Requirements:

„The authors declare no conflict of interest regarding this article"

„The authors declare that all the procedures and experiments of this study respect the ethical standards in the Helsinki Declaration of 1975, as revised in 2008(5), as well as the national law. Informed consent was obtained from the patient included in the study"

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