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Case Report (Pages: 681-685)

Solitary Polypoid Lesion in Gastric Cardia; A Case Report and Literature Review

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Abstract

Introduction

Hyperplastic polyps of the esophago-gastric junction are seen during endoscopic evaluation of upper gastrointestinal tract. They are usually asymptomatic and discovered accidentally during endoscopic evaluation for other problems. These protrusions are mucosal regenerative response to surrounding mucosal injury.

Case Report

Here we present a 9-year-old boy presenting with abdominal pain and vomiting since about one year ago. Recently, he was suffering from retrosternal chest pain. So after thorough clinical and paraclinical evaluations, upper endoscopy was done and, a small polypoid lesion in esophago-gastric junction was seen. Its surface seems normal and the polyp has no true stalk. Polypectomy was performed without any complication.

Discussion

These lesions usually are regenerative response to surrounding mucosal injury. So, a thorough clinical evaluation and obtaining the sufficient biopsy specimen of the nonpolypoid mucosa are necessary for determining the clinicopathologic context in which the polyps have developed.

***Key Words*:** Cardiac, Endoscopy, Hyperplastic polyp.

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Introduction

Gastroesophageal junction tumors of esophagus are seen during endoscopic evaluation of upper gastrointestinal tract. More than 50 percent of these masses are asymptomatic and often discovered accidentally during endoscopy for unrelated problems (1). Two main etiologies were reported for these benign tumors. In lower esophagus, physical trauma due to acid reflux, irritation from foreign bodies, drugs or chemical agents, irradiation and hiatal hernia are proposed as the main etiology (2). Rare associations include recent or concurrent infections, anastomotic or polypectomy sites and vomiting. On the other hand, for papilloma of mid and upper esophagus, human papilloma virus is the dominant cause. These polyps were discovered most commonly in in the region of Esophagogastric Junction (EGJ) region followed by lower esophagus and mid-esophagus (3). At endoscopic evaluation, these solitary polyps are mucosal protrusion without a true stalk. Mostly, they are < 5mm in diameter and large polyps are very rare in children. Due to keratinization, the overlying mucosa may be roughened and white, but usually its surface seems normal. Microscopical evaluation reveals a fibro-vascular core. The cover of this core is composed predominantly of cardiac type mucosa, followed by squamous mucosa and then admixture type. A new theory in pathogenesis of hyperplastic polyps is the regenerative response to surrounding mucosal injury (4). Here we present a boy with solitary polypoid hyperplastic polyp in EGJ.

Case Report

A 9-year-old boy presenting to our clinic (Department of Pediatric Gastroenterology, Mofid Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran) with the chief complaint of abdominal pain since one year ago. He was suffering from infrequent non-bloody, non-bilious vomiting. Since one month prior to being visited in our clinic, retrosternal chest pain was added to his problems. Past medical history was not significant. His parents were not suffering from peptic ulcer disease or familial polyposis syndromes. His current weight was 33 Kg and the height of 139 cm was measured in his growth parameters, both of them above 50 percentile for weight and height, respectively. In physical examination, his vital signs were stable. No perioral, buccal or perianal hyperpigmentation was detected. At esophagogastroduodenoscopy, a small polypoid lesion in esophago-gastric junction (EGJ) was detected (Figure. 1).

Its surface seems normal and the polyp has no true stalk. Polypectomy was performed without any complication. Stomach and duodenum were normal in endoscopic evaluation. In histopathological evaluation of the specimens, a hyperplastic esophageal polypoid lesion with presence of two very villous structures with clear vacuolization of lining cells was seen. But no gobletting was detected in EGJ specimen. In the base of polyp, mild infiltration of inflammatory cells was seen in lamina propria (Figure. 2) Alcian blue is weakly positive in superficial and crypt lining cells. There is a mild to moderate infiltration of lymphoblasts and some eosinophil (5-3/HPF) in lamina propria, few involving superficial lining.

The other specimen from distal esophagus showed a small piece of esophageal stratified squamous epithelium with poor orientation however there is apparent moderate basal layer hyperplasia and presence of some papillae containing few inflammatory cells at least implying mild esophagitis. Biopsies from prepyloric and second part of duodenum were thoroughly evaluated and no significant pathology was

detected. No Helicobacter pylori microorganisms were seen. After being treated with proton pump inhibitors for one month his complaint was completely suppressed and he became symptom free.

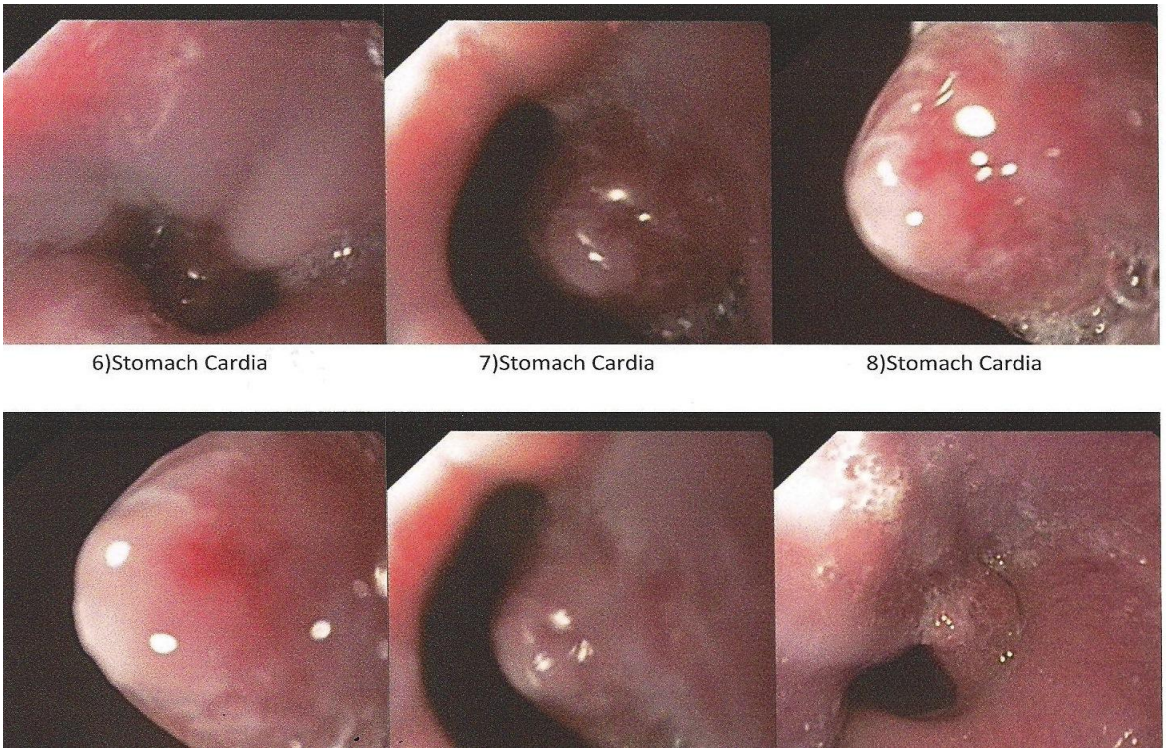

Fig.1: Endoscopic photo of a polyp at the gastroesophageal junction.

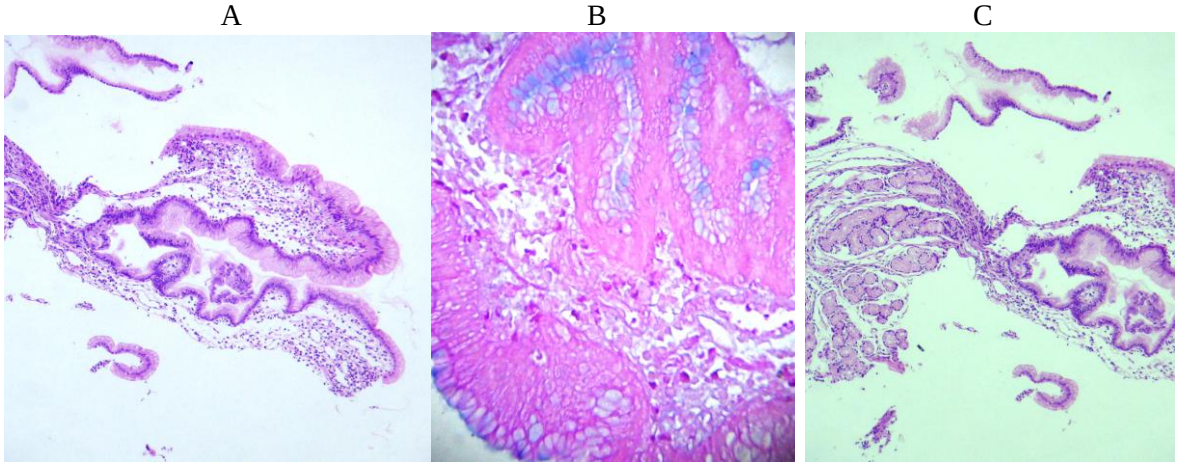

Fig. 2: A, Two Tall Villous Structures Seen B, Base of Polyp (Some Mucus Glands Are Seen) Mild Infiltration of Inflammatory Cells Seen in Lamina Propria. (Hematoxylin and eosin stain; original magnification *40). C, Alcian Blue Staining is Positive in Some Cells (Blue Staining).

Discussion

Hyperplastic polyps of the esophago-gastric junction or gastric cardia develop very rarely in pediatric population (3). By reviewing the literature, most case report and systematic reviews about this type of polyp were limited to adults (5). So, the

articles that report the exact incidence and prevalence of this entity, and their comorbidities are limited. In a retrospective multicenter study by Septer and his co-workers (6) esophagogastroscopies were performed in 9,438 patients with a mean age of 9.2 year-of-age. Hyperplastic polyps were identified in 13 patients (0.14%). In this study, emesis was the most common indication for endoscopy. Seven polyps out of 13 were inflammatory. EGJ was the most common site of polyps and 7 cases of the 13 had polyp at this location. Esophagitis was seen in 69% of these patients with hyperplastic polyps (6). The dominant hypothesis in the pathogenesis of hyperplastic polyps is recurrent or recent erosive lesions of esophagus. Of the most common types of esophageal injuries that result in chronic inflammation and regenerative proliferation, gastroesophageal reflux disease, irritation from foreign bodies, drugs or chemical agents and irradiation should be considered in the pathogenesis of these lesions (2, 7).

In histopathological evaluation of the hyperplastic polyp in our patient, mild infiltration of inflammatory cells was the only considerable finding. These results underscore the pathogenesis of esophageal/EGJ region hyperplastic polyps as a mucosal regenerative response to surrounding mucosal injury. So careful clinical history taking and obtaining the sufficient biopsy specimen of the nonpolypoid mucosa, are essential for determining the clinicopathologic context in which the polyps have developed. In patients with gastrointestinal symptoms thorough physical examination for hyperpigmentation in buccal cavity, perioral and perianal area is very useful for considering some polypoid syndromes such as Peutz-Jeghers syndrome. In these patients hamartomatous inverted polyps and inverted hyperplastic polyps can be detected in upper endoscopic evaluation but their incidence is very rare (8, 9). The other important point is the role of *Helicobacter pylori* in the pathogenesis of inflammatory fibroid polyps. In the study performed by Albuquerque and his co-workers (10), the clinico-pathological features of inflammatory fibroid polyps, the frequency of *Helicobacter pylori* infection in the overlying gastric mucosa, and its putative impact on the phenotype of the polyps were evaluated since 1998 to 2012. In according to their large study, *Helicobacter pylori* infection was identified in about half of the cases and was associated with a lower frequency of onionskin features in the polyps. So it is important to evaluate the presence of this infection in patients with gastric polypoid lesions.

Conclusion

Although hyperplastic gastric polypoid lesions are rare, they are usually regenerative response to surrounding mucosal injury. So, a thorough clinical evaluation and obtaining the sufficient biopsy specimen of the nonpolypoid mucosa are necessary for determining the clinicopathologic context in which the polyps have developed.

Conflict of interest: None.

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