

Original research-Orijinal araştırma

Frequency of various types of gastric polyp

Farklı gastrik polip tiplerinin sıklığı

İsmail Demiryılmaz, Yavuz Albayrak*, Serpil Postgil Yılmaz

General Surgery Clinic (İ. Demiryılmaz, MD), İbn-i Sina Hospital, TR-38070, Kayseri, Department of General Surgery and Burn Unit (Y. Albayrak, MD), Erzurum Region Teaching and Research Hospital, TR-25000 Erzurum, Department of Pathology (S. P. Yılmaz, MD), Kayseri Teaching and Research Hospital, TR-38010 Kayseri

Abstract

Aim. Any discrete lesion protruding into the lumen of gastrointestinal tract detected by endoscopy is called as "polypoid lesion". Thus, we aimed to study the demographic, clinical, and endoscopic characteristics of patients with gastric polypoid lesions. **Method.** Upper gastrointestinal system endoscopy was carried out in a total of 3375 patients between the dates of October 2006-July 2010. In 66 (1.95%) of these patients polypoid lesions were observed in various anatomical sites of the stomach, and polypectomy was performed. Sixty six patients who had gastric polyp or polyps were included in this study. The localization, size, histopathological findings and treatment of the polyps were recorded. All patients had at least one gastric polyp confirmed by histological examination. **Results.** The most frequent presenting symptom was epigastric pain (72.7%) followed by dyspepsia (18%), and anemia (4.5%). Fifty-one of the patients had one, 8 had two and 7 had three polyps. Out of 88 gastric polypoid lesions, 41 (46.5%) were located in the antrum followed by 26 (29.5%) in corpus, 12 (13.6%) in cardia, and 9 (10.4%) in around anastomoses. Fifty-three (60.2%) of the polyps were smaller than 1 cm, 23 (26.1%) were between 1-2 cm, and 12 (13.7%) were larger than 2 cm. In the histopathological examination of the polyps, 71 (80.7%) were found to be hyperplastic polyps, 15 (17%) were inflammatory polyps and 2 (2.3%) were adenomatous polyps. All patients with multiple polyps had only a single histological type. **Conclusion.** For this reason, endoscopic polypectomy to be a sensible diagnostic and therapeutic procedure of gastric polyps when feasible. Finally, endoscopic surveillance in these patients may be recommended to exclude both possibility of recurrence and cancer development elsewhere in stomach.

Keywords: Gastric polyp, hyperplastic polyp, inflammatory polyp, adenomatous polyp, polypectomy

Özet

Amaç. Endoskopik olarak görülen gastrointestinal sistemin lümenine çıkıntı oluşturan herhangi bir lezyon polipoid lezyon olarak adlandırılır. Çalışmamızda, gastrik polipoid lezyonlu hastaların demografik, klinik ve endoskopik özelliklerinin incelemeyi amaçladık. **Yöntem.** Ekim 2006 ile Temmuz 2010 tarihleri arasında toplam 3375 hastaya üst gastrointestinal sistem endoskopisi yapıldı. Bu hastaların 66 (%1,95)'sında midenin çeşitli anatomik pozisyonlarında polipoid lezyon görülerek bunlara polipektomi yapılmıştı. Gastrik polip tespit edilen 66 hastadaki gastrik polip ve/veya poliplerin lokalizasyon, boyut, histopatolojik bulguları ve tedavileri üzerinde duruldu. Tüm hastaların histolojik inceleme ile doğrulanmış en az bir polibi mevcuttu. **Bulgular.** Hastalarda görülen en sık şikayet %72,7 ile epigastrik ağrı daha sonra ise dispepsi (%18) ve anemi (%4,5) idi. Hastaların 51'inde bir adet, 8'inde iki ve 7'sinde üç adet polip mevcuttu. Toplam 88 adet gastrik polipoid lezyonun 41 (%46,5)'i antrumda, 26 (%29,5)'si korpusta, 12 (%13,6)'si kardiada ve 9 (%10,4)'ü anastomoz sahasında lokalize idi. Poliplerin 53 (%60,2)'ü 1 cm'den küçük, 23 (%26,1)'ü 1-2 cm arasında ve 12 (%13,7)'si 2 cm'den daha büyüktü. Poliplerin histopatolojik incelemesinde 71 (%80,7)'inde hiperplastik polip, 15 (%17)'inde inflamatuvar polip ve 2 (%2,3)'sinde adenomatöz polip tespit edildi. Birden fazla polibe sahip hastaların tümü tek bir histopatolojik tipe sahipti. **Sonuç.** Endoskopik polipektomi gastrik poliplerin teşhis ve tedavisinde duyarlı bir yöntemdir. Sonuç olarak; gastrik polipli hastalarda hem nüks ihtimalini ortadan kaldırmak hemde midenin başka bir yerinde kanser gelişimini engellemek için endoskopi ile takip yapılmalıdır.

Anahtar sözcükler: Gastrik polip, hiperplastik polip, inflamatuvar polip, adenomatöz polip, polipektomi

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***Corresponding author:**

Yavuz Albayrak, MD, Genel Cerrahi Anabilim Dalı ve Yanık Tedavi Ünitesi, Erzurum Eğitim ve Araştırma Hastanesi, TR-25000 Erzurum. E-posta: yavuzalbayrakdr@gmail.com

Introduction

Any discrete lesion protruding into the lumen of gastrointestinal tract detected by endoscopy is called as “polypoid lesion” [1]. Gastric polyps are found in up to 2-3% of gastroscopic examinations. Owing to rare clinical symptoms, such as gastrointestinal bleeding and gastric outlet obstruction, most of them are incidental findings, their size usually ranges from 0.5 to 2cm in diameter [2]. Histologically, they are classified as inflammatory, regenerative, hyperplastic and adenomatous [3]. The reported incidence of malignant transformation ranges between 4 and 70%, varying with size, endoscopic appearance, and histological type [4, 5]. Incidence of inflammatory polyps ranges between 3.1% and 4.5% [6, 7].

In this study, we aimed to study the demographic, clinical, and endoscopic characteristics of patients with gastric polypoid lesions. The histopathological features of these lesions were also reported and their malignancy potential is discussed.

Materials and methods

Records of patients having gastric polypoid lesions detected by upper gastrointestinal endoscopy performed at the Endoscopy Units of Kayseri İbn-i Sina Hospital and Erzurum Numune Hospital General Surgery Departments, between October 2006 and July 2010 were analyzed retrospectively. Olympus GIF100 video endoscope (Olympus, Germany) was used during the study and all endoscopies were performed under sedation with intravenous Aldolan (Liba, USA) and topical pharyngeal anesthesia with 10% lidocaine. The location, shape, and size of each polypoid lesion were assessed. The sizes of the polyps were determined by comparison with the open biopsy forceps. Polypoid lesions were totally removed either by endoscopic polypectomy or by hot biopsy forceps with single or multiple attempts determined by the polyp size. All patients had at least one gastric polyp, as confirmed by histological examination. Endoscopic records were screened for any complication that resulted from polypectomy.

Results

Upper gastrointestinal system endoscopy was carried out in a total of 3375 patients between the dates of October 2006-July 2010. In 66 (1.95%) of these patients, polypoid lesions were observed in various anatomical sites of the stomach, and polypectomy was performed. There were 51 (77.3%) women and 15 (22.7%) men with female predominance. The ages of patients ranged from 26 to 80 years with a median of 53.6. Symptom and anatomical localizations of gastric polyps are given in Table 1. Fifty-one of the patients had one, 8 had two and 7 had three polyps. Fifty-three (60.2%) of the polyps were smaller than 1 cm. 23 (26.1%) were between 1-2 cm. and 12 (13.7%) were larger than 2 cm. All the resected specimens were stained with haematoxylin and eosin for routine histopathological examination. Histological distribution of polyps are given in Table 1. All patients with multiple polyps had only a single histological type. No complication developed following the endoscopic procedure in any patient.

Table 1. Symptoms of patients and characteristics of gastric polyps in the study

	Percent of subjects (%)
Symptoms of patients	
Epigastric pain	72.7
Dyspepsia	18.0
Anemia	4.5
Histology of polyps	
Hyperplastic polyps	80.7
Inflammatory polyps	17.0
Adenomatous polyps	2.3
Localization of polyps	
Cardia	46.5
Corpus	29.5
Antrum	13.6
Around anastomosis	10.4

Discussion

The incidence of gastric polyps was 1.95% in 3375 patients who underwent upper GI endoscopic examination at our hospital. Our rate was very similar to the previously reported frequencies of 2-3% [2]. However, the study by Morais et al. [8], reported the incidence rate of gastric polyps as 0.6%. The clinical findings associated with gastric polyps depend on the polyp size and location [9]. Some patients may present with no specific digestive symptom. Erosion or ulceration of the polyp surface may cause occult bleeding and anemia, and upper gastrointestinal bleeding may occur if there are large lesions. A large polyp with the potential to pass from the antrum to the pylorus can cause intermittent obstruction. In our study, none of the patients had polyps large enough to cause obstruction. Symptoms such as pain, nausea and vomiting were frequent in most patients and could not be attributed solely to the polyp found, since there were frequently other endoscopic alterations implying other gastroenterological diseases [10]. As with other studies, the patients in our study also had epigastric pain, dyspepsia and anemia. Although gastric polyps have been observed in women more than men in some studies and in men more than women in others; the incidence rate was higher in women in our study [8, 11]. The gastric polyp can be located at anywhere in the gastric mucosa. In the study carried out by Gencosmanoglu et al. [11], the localization of gastric polyps have been reported as, in a descending order, antrum (40.7%), cardia (26.7%), corpus (22.7%), fundus (8.7%) and the anastomosis area (1.2%). The study carried out by Li, WB, et al. [12], also reported the placement sites as antrum (40.7%), corpus (32.2%) and fundus (4.6%). The localization of the polyps in our study was similar to the localizations in these two studies. Hyperplastic polyps are most common and account for 70-90% of benign gastric polyps [13]. These lesions have previously been accepted as completely benign. However, some current studies showed that they might include adenomatous changes or dysplastic areas [2, 14]. The reported frequencies of dysplastic foci within hyperplastic polyps showed a wide range (4-22%) [15, 16]. Hizawa [17] and Zea-Iriarte [18] found the incidence of malignancy in hyperplastic polyps to be 2% and 1.8%, respectively. Hyperplastic polyps arise most frequently in patients with an inflamed and often atrophic gastric mucosa [19]. In the industrialized world, both their absolute and relative prevalence have decreased along with the declining prevalence of *H. pylori* infection [20]. Hyperplastic polyps are more frequently observed in the antrum than in other parts of the stomach and are often multiple; these polyps are usually smooth, dome shaped and small in diameter (measuring 0.5-1.5 cm), but they may reach to much larger dimensions, wherein they become lobulated and pedunculated [21]. In larger hyperplastic polyps, the surface epithelium is often eroded. This erosion may result in chronic blood loss and iron deficiency anemia, one of the most common clinical manifestations of hyperplastic polyps. Rarely, patients with large hyperplastic polyps may present with gastric obstruction [22].

Inflammatory fibroid polyp (IFP) is an uncommon non-neoplastic, proliferating lesion of the gastro-intestinal tract, initially described as eosinophilic submucosal granuloma by Vanek [23] in 1949. In the past, IFP was reported under several terms, such as eosinophilic granuloma, submucosal granuloma with eosinophilic infiltration, hemangioendothelioma, hemangiopericytoma, and polypoid fibroma [24, 25]. The pathogenesis of inflammatory fibroid polyps remains largely unknown. Prominent *H. pylori* infection was demonstrated in some cases of gastric Vanek's tumour and remarkable morphological changes were observed after its eradication. In a case described by Matsushashi et al. [26], a 2-cm elevated lesion at the prepyloric region regressed and eventually disappeared within as little as 3 months after eradication. IFP is a solitary polypoid or sessile lesion with an inflammatory basis. It is a rare benign lesion that may occur throughout the digestive tract, but is most often seen in the stomach (approximately 80%) [27]. IFP in the stomach is usually located in the antrum or prepyloric region [28]. Stolte et al. [6] showed that gastric IFPs made up approximately 3% of one series of about 5,500 gastric polyps. They are characterized by non-capsulated, distinctively arranged fibrous tissue and blood vessels, with inflammatory cell infiltration dominated by eosinophils [29]. They are usually asymptomatic and likely to be incidental findings during endoscopies performed for unrelated reasons. When symptomatic, they present with abdominal pain, weight loss, ulcer-like symptoms, overt gastro-intestinal bleeding or iron deficiency anemia and intussusceptions [30]. Prevalence of adenomatous polyps varies widely and is estimated to be 0.5-3.75% in western countries and 9-27% in areas with higher rates of gastric carcinoma, such as China and Japan [6, 31, 32]. The adenomatous polyp rate in our study was consistent with literature. Adenomatous polyps are considered to be premalignant lesions with a rate of malignant transformation of up to 75% [33]. The risk of malignant transformation of adenomas was shown to be related to the large size, high grade of dysplasia and villous structure of the lesions [34]. While polypectomy was performed either endoscopically or surgically in the treatment of symptomatic gastric polyps, there were still no standardized guidelines concerning the management of asymptomatic ones [35]. Many endoscopists first take forceps biopsies from gastric polypoid lesions. After obtaining a definite histopathologic diagnosis, they perform polypectomy to these lesions [35]. However, forceps biopsies carries the risk of missing the neoplastic foci within polyp, since only a small portion of the lesion was sampled in this technique [36]. Seifert and Elster [37] compared histopathological results of biopsy materials and polypectomy specimens of same lesions and showed a remarkable discrepancy between them in 70% of cases. With this observation, the authors recommended to remove all gastric polyps larger than 5mm in diameter by an experienced endoscopist [36]. Endoscopic polypectomy was performed in all of the patients in our study group.

Endoscopic polypectomy seems to be a sensible diagnostic and therapeutic procedure of gastric polyps when feasible. Finally, endoscopic surveillance in these patients may be recommended to exclude both possibility of recurrence and cancer development elsewhere in stomach.

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