

Colonic Lipomas Mimicking Colon Cancer

Kolon Kanserini Taklit Eden Kolonik Lipomlar

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ABSTRACT

Objective: Colonic lipomas are uncommon tumors of the gastrointestinal tract. Most of these tumors are asymptomatic and usually detected incidentally during colonoscopy or laparotomy and do not require treatment. Large lipomas are usually symptomatic and may mimic clinic manifestations of colonic carcinoma. Here we studied seven cases of submucosal and intramuscular colonic lipomas to evaluate the clinical features, diagnosis and treatment of this disease.

Material and Method: Seven patients who were diagnosed with colonic lipoma between 1999 and 2006 were evaluated as regards age, gender, size of tumor, anatomic site, symptoms, location and treatment modality.

Result: The mean age was 57.8± 14.7 years. Five patients were male and two were female. The size of the lipomas ranged from 1 to 5.5 cm and all were symptomatic except one patient. Five of the gastrointestinal lipomas were located submucosally and 2 intramurally. Five lipomas arose from the ascending colon, 1 from the hepatic flexure and 1 from the splenic flexure. Four large GI lipomas were removed by subtotal resection and one case underwent hemicolectomy while two pedunculated lipomas were resected by polypectomy. No recurrence was found after at least one year follow-up with endoscopic examination.

Conclusion: Colonic lipomas may mimic malignancy with their clinical manifestations. Appropriate radiological and colonoscopic evaluation is essential to avoid unnecessary wide resections.

Key Words: Colon, Lipoma

ÖZ

Amaç: Kolonik lipomlar gastrointestinal sistemin nadir görülen tümörleridir. Bu tümörlerin çoğu asemptomatiktir, genellikle rastlantısal yapılan kolonoskopi veya laparotomi sırasında saptanırlar ve tedavi gerektirmezler. Geniş lipomlar genellikle semptomatiktir ve klinik bulguları kolonik karsinomu taklit edebilir. Bu yazıda submukozal ve intramusküler 7 kolon lipomu olgusunun klinik özellikleri, tanı ve tedavi değerlendirilmesini sunduk.

Gereç ve Yöntem: 1999 ve 2006 arasında kolonik lipom tanısı almış 7 hasta yaş, cinsiyet, tumor boyutu, anatomik yerleşim, semptomlar, lokalizasyon ve tedavi şekline göre değerlendirildi.

Bulgular: Ortalama yaş 57,8± 14,7 yılı. Beş hasta erkek 2'si kadındı. Lipomların boyutları 1 ile 5,5 cm arasında değişmekteydi ve 1 hasta hariç hepsi semptomatiktir. Gastrointestinal lipomların 5'i submukozal 2'si intramural yerleşimliydi. 5 lipom çıkan kolondan, 1' hepatic fleksuradan ve 1'i splenik fleksuradan kaynaklanmaktaydı. 4 geniş lipom subtotal rezeksiyon, 1 lipom hemikolektomi ve 2 pedinküllü lipom polipektomi ile çıkarıldı. Endoskopik muayeneyle yapılan en az 1 yıllık takipte rekürrens saptanmadı.

Sonuç: Kolonik lipomlar klinik bulguları nedeniyle maligniteyi taklit edebilir. Uygun radyolojik ve kolonoskopik değerlendirme, gereksiz geniş rezeksiyondan kaçınmayı sağlar.

Anahtar Sözcükler: Kolon, Lipom

INTRODUCTION

Gastrointestinal lipomas are single, benign nonepithelial tumors which grow slowly. They are mostly located in the colon, but they can also be found in the esophagus, small intestine, and rarely in the stomach (1,2). Clinical and postmortem studies reveal an incidence of lipoma that varies between 0.2 and 4.4% (3). In general, colonic lipomas do not cause symptoms and therefore are usually detected incidentally during colonoscopy, surgery or autopsy.

However, a minority of lipomas can cause symptoms when the lesion is large, especially those with a diameter greater than 2 cm (4,5). Common symptoms include constipation, diarrhea, colicky abdominal pain, or lower gastrointestinal bleeding and especially intussusception. They are often confused with malignant tumors so that most of them are diagnosed after intervention (1). Here we studied seven cases of submucosal and intramuscular colon lipomas to emphasize the clinical features, diagnosis and treatment of this disease.

Received : 16.03.2010

Accepted : 07.06.2010

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MATERIAL and METHOD

GI lipoma was diagnosed in seven patients who underwent colonoscopy from 1999 to 2006. All these cases were retrieved for this study. Clinical data, such as age and gender of the patient, site and size of the tumor, symptoms and treatment were obtained from the patients' records. All cases were reviewed microscopically.

RESULTS

The clinical features of the 7 cases of colonic lipoma are summarized in Table I. Five of the patients were male and 2 female, with a mean age of 57.8 years (range: 30–76 years). The most common site was the ascending colon (5 cases), followed by the hepatic flexure (1 case) and splenic flexure (1 case). The size of the tumors varied from 1 to 5.5 cm (mean: 2.8 cm). Clinically, six patients complained of at least one GI symptom such as bleeding, abdominal pain, distention, constipation, or diarrhea. Only one patient was asymptomatic. Five of them were located in the submucosa and the other two were located intramurally. The most common form of lipomas were pedunculated. Four large GI lipomas were removed by subtotal resection and one of the lipomas underwent hemicolectomy due to accompanying inflammatory bowel disease. Two small pedunculated lipomas were resected by polypectomy.

Grossly, the tumors appeared as bright yellow and greasy exophytic masses (Figure 1). The tumor was covered by normal mucosa and had uniform parenchyma in bright yellow color (Figure 2). Microscopically, the well-circumscribed lipomatous lesion was covered by mucosa on these cut surfaces and consisted of mature adipocytes (Figure 3). Some of the lipoma appeared to be located within the muscularis propria. The muscularis propria appeared to embrace the lipoma from the serosal side, although the tumor was overlaid with the fused muscular layer, which was composed of the muscularis mucosa and muscularis propria.

DISCUSSION

Colonic lipomas are mesenchymal in origin and they arise from adipose tissue in the bowel wall (3,5,6). Elders are more likely to be involved, the peak incidence being reported at the fifth to sixth decades of life (6-8). In our study the mean age was similar as literature and male dominance was observed.

In the gastrointestinal tract, at least 70% of lipomas are located on the right side of the colon. Other colonic locations

are reported as the transverse colon, including both hepatic and splenic flexures, descending colon, sigmoid colon and rectum in decreasing order (3,5-9). Other sites include the small intestine (25%) stomach (5%) and esophagus (3,10-12). They are multiple in up to 26% of cases (10,13). In our study five lipomas (71.4%) were arising from ascending colon, one from the hepatic flexure (14.3%) and one from the splenic flexure (14.3%).



Figure 1: Exophytic mass in the bowel lumen.



Figure 2: The tumor was covered by normal mucosa and had uniform parenchyma in bright yellow color.

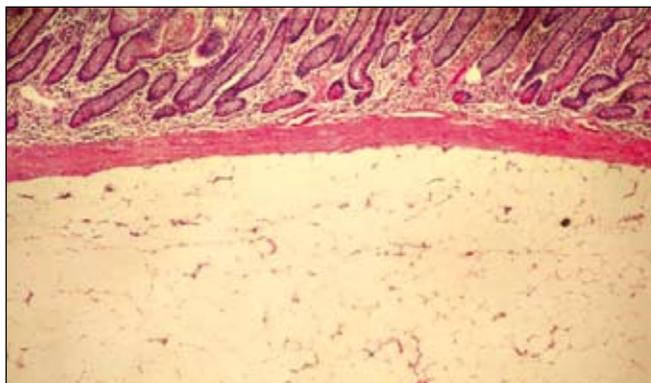


Figure 3: The tumor was well circumscribed and covered by mucosa and consisted of mature adipocytes (H&E, x200).

Table I: Clinical features for 7 cases of colonic lipoma

Age	Sex	Anatomic site	Size(cm)	Symptom
76	Male	Ascending colon	2.5x1.5	Bleeding diarrhea
54	Male	Splenic flexure	5.5x3	Distension constipation
60	Male	Hepatic flexure	1x1	Asymptomatic
30	Female	Ascending colon	1.5x1	Abdominal pain, bleeding
63	Female	Ascending colon	3x2.5	Distension constipation
53	Male	Ascending colon	5x4.3	Diarrhea abdominal pain
60	Male	Ascending colon	2x2	Diarrhea, abdominal pain

Ninety percent of colonic lipomas lie in the submucosa while the remaining subserosal lipomas make up less than 10% (10,13). In our cases five lipomas were in the submucosa and two were intramurally located. Pathologically, they are deposits of adipose tissue in the bowel wall, in a submucosal, pedunculated, sessile, or very rarely annular position (10,13). All five submucosal lipomas were pedunculated. In general, they form an intramural, discrete, smooth or lobulated, round or ovoid soft mass covered by intact mucosa, but occasionally they protrude subserosally (11,12).

The majority of colonic lipomas are small, single, submucosal tumors ranging in size from 2 mm to 30 cm in diameter (3). Patient symptoms are reported to be related to the size, location, and mobility of the lipoma (8). When lipomas are larger than 2 cm, they may cause gastrointestinal bleeding with anemia, abdominal intestinal obstruction, abdominal pain, bloating, changes in bowel habits, weight loss, nausea, vomiting, and abdominal distention and rarely intussusception (1-8,10,13,14). We can conclude that the most common signs and symptoms include alteration in bowel habits (71.3%), abdominal pain (42.8%) and bleeding (28.5%). A preoperative diagnosis of intussuscepted colonic lipoma is difficult, especially in cases of an unusual site and morphological pattern, so they can be mistaken for malignant colonic tumors and most of them are diagnosed after intervention (3,5).

The malignant transformation of a lipoma is extremely rare, and a recurrent lipoma has never been reported. Nonetheless, operative or endoscopic intervention may be required to differentiate this lesion from a malignant or premalignant lesion (3).

The preoperative diagnostic accuracy is 67% (3). Although imaging findings may be less specific, they can still be helpful for preoperative diagnosis. Barium enema may demonstrate a filling defect, and the lesion may exhibit a lobulated appearance but this phenomenon is non-specific

(4,6,10). Computerized tomography is considered to be the definitive diagnostic measure in recognizing colon lipomas because the masses present characteristic fatty densitometric values. On CT scan image, lipomas have a uniform appearance with a fat equivalent density and smooth border but the diagnostic value of CT is limited, particularly in small lipomas (6). With the widespread application of colonoscopy, small lesions are found incidentally, and their diagnosis and treatment are mainly dependent on endoscopy (4). Colonoscopically, lipomas are generally covered by smooth mucosa. One can sometimes elicit a cushion sign or pillow sign by pressing the forceps into the mass and observing whether an impression is left. Moreover, the extrusion of fatty tissue following biopsy is occasionally seen, and such a finding is referred to as the naked fat sign (10,13,15). Although CT and MR imaging is helpful for evaluation, the definitive diagnosis is made on the basis of histopathological examination of the resected specimen (5).

Multiple operative techniques ranging from laparotomy with enucleation to colotomy and segmental colonic resection have been described (4,5,13). Jiang et al, (4) reported that surgical removal should be the preferred choice for the following indications: lipoma with a diameter of greater than 4 cm, with a sessile appearance or limited pedicle; unclear preoperative diagnosis; lesions with significant symptoms, especially the appearance of intussusceptions; involvement of the muscular layer or serosa; and lesion that cannot be resected radically by colonoscopy (4).

In conclusion, it is important to know that benign tumors like lipomas may cause gastrointestinal bleeding with anemia, intestinal obstruction, abdominal distention, and intussusception and therefore mimic malignancy. Appropriate radiological and colonoscopic evaluation is essential to avoid unnecessary wide resections. Endoscopic polypectomy and local resection is preferential management for lipomas.

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