Lipoma of the sigmoid colon

Matilda A. Djolai*, Bojana M. Andrejić†, Dejan Dj. Ivanov‡

*Center for Pathology and Histology, Novi Sad, Serbia; †Department of Histology and Embryology, Faculty of Medicine Novi Sad, Novi Sad, Serbia; ‡Clinic for Abdominal, Endocrine and Transplantation Surgery, Clinical Center of Vojvodina, Novi Sad, Serbia

Abstract

Introduction. Lipoma is a benign tumor of adipose tissue, the most common tumor of the human body soft tissues. As such, it can be found almost anywhere in the human body including the gastrointestinal system (incidence below 0.5%), but rarely in the sigmoid colon.

Case report. This is a case report on symptomatic polyp of the sigmoid colon, which after one year, at control colonoscopy, caused suspicion to malignancy. Endoscopically diagnosed polipoid lesion was laparoscopically removed. The pathohistological diagnosis determined benign, submucosal, incapsulated lipoma of the sigmoid colon.

Conclusion. Although lipomas of the gastrointestinal tract are rare, this case clearly indicates that we should not prematurely and without histological confirmation of malignancy do more extensive resection for a suspected malignancy.

Key words: lipoma; sigmoid neoplasms; gastrointestinal neoplasms; diagnosis; diagnosis, differential; laparoscopy; treatment outcome.

Introduction

Lipoma is a benign tumor and the most common tumor of soft tissues in human 1, 2. Histologically, lipoma consists of encapsulated mature, white adipose tissue 3.

Lipoma can be found almost anywhere in human body, but most frequent localization is subcutaneous tissue of upper parts of the body, especially trunk and neck 1, 2. Cases of rare (atypical) lipoma localization have been reported – intracranial 1, 2, liver 4, myometrium uteri 5, oral cavity 6, and different parts of gastrointestinal system starting from pharynx to anal zone 7.

Inside the gastrointestinal system, the highest incidence of lipoma is in the colon, where it represents the second most frequent benign tumor, after adenomas of colon 3, 8.

Gastrointestinal lipomas usually have no symptoms (unless greater than 2 cm) and are discovered accidentally 5, 9.

Case report

A 64-year-old female patient with body mass index 23.79 kg/m² was admitted to the Clinic for Abdominal, Endocrine and Transplantation Surgery, Clinical Center of Vojvodina, Novi Sad. A year before the surgery, due to abdominal pain and occult blood in the stool the patient underwent colonoscopy, and was diagnosed with polypus of sigmoid colon. Colonoscopy after one year showed changes in the part of the intestinal epithelium suspicious for malignancy. After preoperative preparation and analyses, polypus was laparoscopically removed. The patient went through a regular postoperative course.

The removed colon was 13 cm long, and 3 cm from the proximal end and 10 cm from the distal end, a sessile polypoid change with dimensions 1.8 cm x 1 cm was detected. Cross section revealed grey to yellow, homogenous struc-
tire. Polipoid structure and deeper parts of intestinal wall were sampled, fixated in formalin, dehydrated, paraffin embedded and permanent paraffin blocks were formed. Paraffin blocks were sectioned to a thickness of 5 micrometers and stained for hematoxylin and eosin (H&E).

The examined material in some sections showed normal intestinal wall structure, while in others colonoscopically registered, polipoid structure was observed, coated with intestinal mucosa. In submucosal layer there was demarcated, encapsulated tissue of the tumor, composed only of mature adipocytes without cellularity or atypia (Figure 1). The described histological feature was typical of lipoma. Tumor tissue was elevating mucosa and forming macroscopically described polipoid formation. Mucosal surface and crypts of mucosa above the polyp were lined with mildly hyperplastic epithelium. The lamina propria contained diffuse, moderate inflammatory infiltrate and erythrocytes.

![Fig. 1 – Encapsulated tissue of the lipoma (HE, x40)](image)

**Discussion**

Lipomas are frequently diagnosed in soft tissues, and are most common in people aged 40–60 years, more frequently in females.

Of all lipomas in the gastrointestinal system, 65% is located in the colon, 20%–25% in the small intestine and it is extremely rare in the gaster and the esophagus. Most common lipomas are present in the ascending colon (coecum included), transverse colon (including hepatic and splenic flexure), and rarely at the descending and sigmoid colon and rectum. Lipomas of the gastrointestinal system are mostly located in submucosa, less in subserosa. The first description of colonic lipoma was given by Bauer in 1757.

The appearance of clinical symptoms is related to the dimension of the tumor. Tumor size can range from 1.8 to 3.5 cm, and as symptomatic are generally considered those larger than 2 cm. Symptoms may include: abdominal pain (diffused or localised), mechanical obstruction, hemorrhage, constipation. There is a report on a case of gastric, antral lipoma prolapsing into duodenum, causing duodenal ulcer. Although the patient in this case came with symptoms frequent in lipoma, it did not lead to proper diagnosis.

Most of lipomas do not require treatment, except for those which rapidly grow or painful symptomatic ones. Available methods for their treatment are endoscopic removal of lipoma (diameter less than 2 cm), surgical extraction (diameter > 2 cm, subserosal location or uncertain diagnosis), steroid injections and liposuction.

On the first colonoscopy polipoid structure was detected in our patient, but after a year, on control colonoscopy the same polipoid structure brought to misapprehension and suspicion to malignantly altered polypus.

Colonoscopy reveal the condition of the superficial mucosa above a lipoma, which in case of erosion, hyperplasia (as in the presented case) or dysplasia of the epithelia may appear to be malignant, and cause repeated colonoscopies and extraction of polypus in spite of biopsies which confirmed benign nature of the mucosal lesion.

From histopathological point of view, a common problem in the diagnosis is the distinction between true lipomas from simple multiplication of adipose tissue. This multiplication is particularly common in the coecum, which is the most common site of lipomas. It is characterized by hypertrophy of adipose tissue in the submucosal intestine wall, which is not encapsulated. In the presented case, a lipoma was localized in the sigmoid colon, in which the literature claims, lipomas are rare. Tumor in the presented case is clearly demarcated and encapsulated which removed the doubt on simple multiplication and hypertrophy of adipose tissue. Magnetic resonance is considered to be the best imaging method for diagnostic of lipoma, but it is not a part of standard diagnostic algorithm, so most reliable, precise and definitive diagnosis is obtained by histological examination.

Typical chromosome aberrations were found in lipoma tissue in recent years, but it was impossible to run these tests because all the material from surgery underwent histological procedures.

Although lipomas of the gastrointestinal tract are rare (incidence below 0.5%), the presented case clearly indicates that we should not prematurely and without histological confirmation of malignancy, do more extensive intestine resection for suspected malignancy. In particular, caution should be taken in patients with a history of lipomas at other sites, in obese patients, patients suffering from dyslipidemia and females in menopause.

**Conclusion**

All of the stated above show the difficulties of preoperative diagnostics of benign lipomas and other malignant lesions of the colon. Concerning clinical signs and symptoms they are often similar in appearance. Even with abdomen radiography and colonoscopy, it is not possible to make a precise differential diagnostic of these states. Only prompt pathohistological examination give a clear insight into the nature of the change and prevents further more aggressive conservative or surgical treatment in case of suspicion of malignancy.

**Acknowledgements**

This paper is a part of the project No. 41012 funded by the Ministry of Science of the Republic of Serbia.
REFERENCES


Received on July 4, 2011. Revised on December 20, 2011. Accepted on December 21, 2011.