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Laparoscopic Resection of the Schwannoma of the Colon: Case Report and Review of the Literature

Laparoskopik Kolon Schwannom Rezeksiyonu: Olgu Sunumu ve Literatür İncelenmesi

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ABSTRACT

Schwannomas are slowly growing nerve sheath tumors originating from Schwann cells (neural crest) of neural tissue and are usually known to have benign behavior. Although they are usually observed in the head, neck and extremities, they can rarely be encountered in gastrointestinal system without Von Recklinghausen's disease. They constitute 2-6% of all gastrointestinal tract submucosal tumors. The preoperative diagnosis of schwannoma is difficult and treatment is radical excision. Herein, we describe a case of schwannoma of the ascending colon that was resected with laparoscopic right hemicolectomy in the light of the literature.

Keywords: Schwannoma, Von Recklinghausen's, right hemicolectomy

ÖZ

Schwannomlar nöral kılıfta Schwann hücrelerde köken alan; sıklıkla kafa, boyun ve ekstremitelerde gözlenen yavaş büyüyen tümörlerdir. Kolon ve rektumda Von Recklinghausen ile ilişkisiz primer schwannom görülmesi oldukça nadirdir. Tüm gastrointestinal kanal submukozal tümörlerin %2-6'sını oluştururlar. Preoperatif tanı alması zor olup, tedavisi radikal cerrahi eksizyondur. Biz bu yazıda çıkan kolonda schwannomu olan ve laparoskopik sağ hemikolektomi uyguladığımız olguyu literatür eşliğinde anlatmayı amaçladık.

Anahtar Kelimeler: Schwannom, Von Recklinghausen, sağ hemikolektomi

Introduction

Schwannomas constitute 1% of gastrointestinal benign tumors (1). Regarding gastrointestinal tract, its rate is 83% for the stomach and 12% for the small intestine (2). Colorectal localization is very rare. They are slow-growing, usually benign, encapsulated tumors and constitute 2-6% of all gastrointestinal tract submucosal tumors (3,4). Local and distant metastasis rates are 30% and 2%, respectively (1). The incidence is equal in women and men, and the age of onset is 60-70 years (2). In this article, we describe a 67-year-old schwannoma case diagnosed postoperatively.

Case Report

A 67-year-old male patient was admitted to our clinic with fatigue. The patient's medical history was unremarkable. The laboratory tests were within normal limits except for hemoglobin value of 5.8 g/dL and hematocrit value of 28.8%. A colonoscopy was performed following detection of a 3.5x4 cm polypoid mass at the cecum and ascending colon in abdominal computed tomography (Figure 1). The lesion was approximately 3 cm and located at the ascending colon, and was reported to be an ulcerated, polypoid gastrointestinal stromal tumor (GIST). A biopsy was obtained and was reported to be lymphoma or leiomyoma. Laparoscopic right hemicolectomy was performed. There

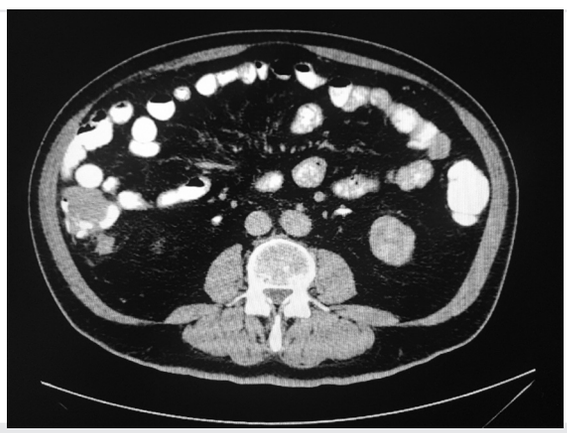

Figure 1. Computed tomography image

This was presented as a poster in 21st National Congress of Surgery in 2018.

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was no complication in the patient after a hospitalization period of 5 days. Pathology report was "4x3.8x3 cm non-invasive tumor with Ki-67 4%, mitotic index <1, CD117, CD34, desmin negativity and S100 positivity, compatible with schwannoma. Thirty-three lymph nodes were sampled and no metastasis was detected. The patient, who is in the 5th month of the follow-up, is uneventful. Written informed consent was obtained from the patient.

Discussion

Schwannoma was first reported by Verocay (4) in 1910. It mostly originates from Aurbach's plexus in the gastrointestinal tract and it has a sessile polyp structure growing towards the lumen. It has pedicled polyp appearance when originates from Meisiner's plexus (2). Diagnosis by biopsy is difficult due to submucosal growth pattern (1). Diagnosis is usually made by postoperative immunohistochemistry. Although schwannoma is a benign tumor with slow growth, it may show malignant transformation if left untreated. It causes symptoms such as abdominal pain, obstruction and rectal bleeding caused by other polypoid lesions (5). In our case, it was detected in a patient who was examined due to anemia and no similar case has been reported in the literature.

Schwannomas regarded as one of the subtypes of GISTs are diagnosed by immunohistochemical examination. They are CD117 (KIT), CD34, CK5, spinal muscular atrophy and desmin negative. They generally show positive staining for S100 protein and vimentin (5). Having a Ki-67 proliferative index of ≥5% and tumor diameter greater than 5 cm increases the probability of malignancy. In addition, mitotic activity rate of >5 mitosis is also a parameter that increases the risk of metastasis and recurrence (6). In our case, Ki-67 was 4%, the tumor was 4 cm in the widest part and the mitotic index was <1.

The general opinion in the treatment is complete local excision. Radical resection and lymphadenectomy are acceptable if there is no definitive pre-operative diagnosis. Nowadays, laparoscopic colectomies are widely used compared to conventional methods with less hospital stay, less postoperative pain and cosmetic superiority without increasing the risk of complications. We also performed a laparoscopic right hemicolectomy in this case. Since there was no pre-operative diagnosis, we added lymphadenectomy. There was no complication or recurrence during follow-up.

Conclusion

Schwannomas are tumors diagnosed postoperatively and their treatment is en bloc resection. Laparoscopic approach can be performed safely as in other gastrointestinal tumors.

Informed Consent: Written informed consent was obtained from the patient.

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