Case Report

Schwannoma of Transverse Colon Mimicking Carcinoma: A Case Report

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Schwannomas are rare gastrointestinal mesenchymal tumors. We report a schwannoma of the transverse colon mimicking a carcinoma with presentation as hematochezia. A 64-year-old woman had been passing bloody stool since 2 months. The colonoscopy showed a solitary and elevated polypoid tumor in the transverse colon, and biopsies revealed acute and moderate chronic inflammation. The patient underwent radical right hemicolectomy, and the histology finding was a spindle cell tumor. The immunohistochemical results revealed strong and diffuse positivity for S-100, and negativity for CD117, CD34, and smooth muscle actin. Therefore, the final pathological diagnosis was a schwannoma.
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Key Words
Schwannoma;
S100

A schwannoma, also known as a neurilemmoma, is a benign nerve sheath tumor that arises from the Schwann cells of a peripheral nerve.[1] It commonly occurs in the peripheral nerves of the limbs, spinal cord, and the central nervous system. Gastrointestinal tract schwannomas are rare and most of them are located in the stomach. Gastrointestinal schwannomas account for 0.4%-1% of all submucosal tumors of the gastrointestinal tract.[2,3] A primary colon schwannoma is extremely rare. Correct pathologic diagnosis is difficult before complete resection of the tumor, even with the assistance of the colonoscopy and computed tomography.

Case Report

A 64-year-old woman complained of intermittent bloody stool since 2 months. There was no change in bowel habits or abdominal pain. She had no history of systemic disease in the past. Colonoscopy revealed a solitary and elevated, sessile polypoid lesion of 3 cm in diameter in the transverse colon, approximately 70 cm from the anal verge (Fig. 1). Subsequent biopsies of the lesion demonstrated acute and moderate chronic inflammation with granulation tissue. Abdominal computed tomography showed a homogeneously enhancing polypoid mass in the proximal transverse colon (Fig. 2). The patient underwent laparotomy and radical right hemicolectomy, and the postoperative course was uneventful. Histopathology showed that the tumor was mainly composed of spindle cells and lymphoid infiltration. The immunohistochemical results revealed strong anddiffuse positivity for S-100, and negativity for CD117, CD34, and smooth muscle actin (Fig. 3). The findings obtained

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on histopathology examination and immunohistochemical staining confirmed the diagnosis of a schwannoma (the mucosa, submucosa, and muscularis propria were invaded). No recurrence of the tumor was noted after 6 months of follow-up.

Discussion

Lamy first described colonic schwannoma in 1968,[4] and Ito et al. published 37 cases of schwannomas of the large bowel in 1996.[5] Gastrointestinal schwannomas have a similar incidence in men and women with a median age of 50-65 years old.[6] On the basis of the size and location of the tumors, schwannomas can cause abdominal pain, bloody stool, anal pain, and constipation. The most common site of colonic schwannomas was in the rectosigmoid colon, and constipation was the most common symptoms.[7]

Accurate preoperative diagnosis of colonic schwan-

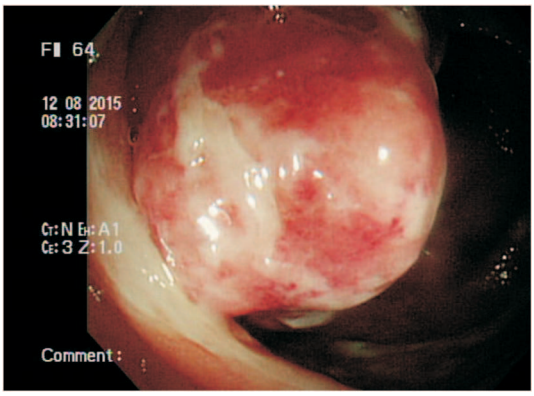

Fig. 1. Colonoscopy: A 3 cm polypoid mass in the transverse colon.

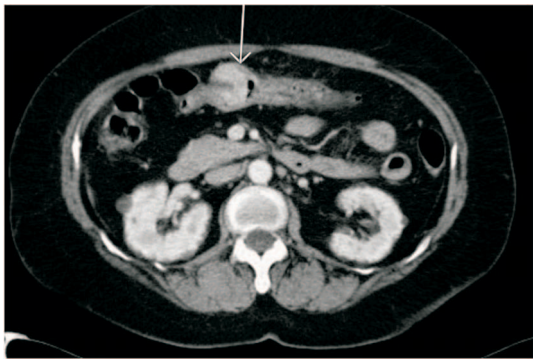

Fig. 2. Abdominal computed tomography revealed a homogeneously enhancing polypoid lesion in the transverse colon (white arrow).

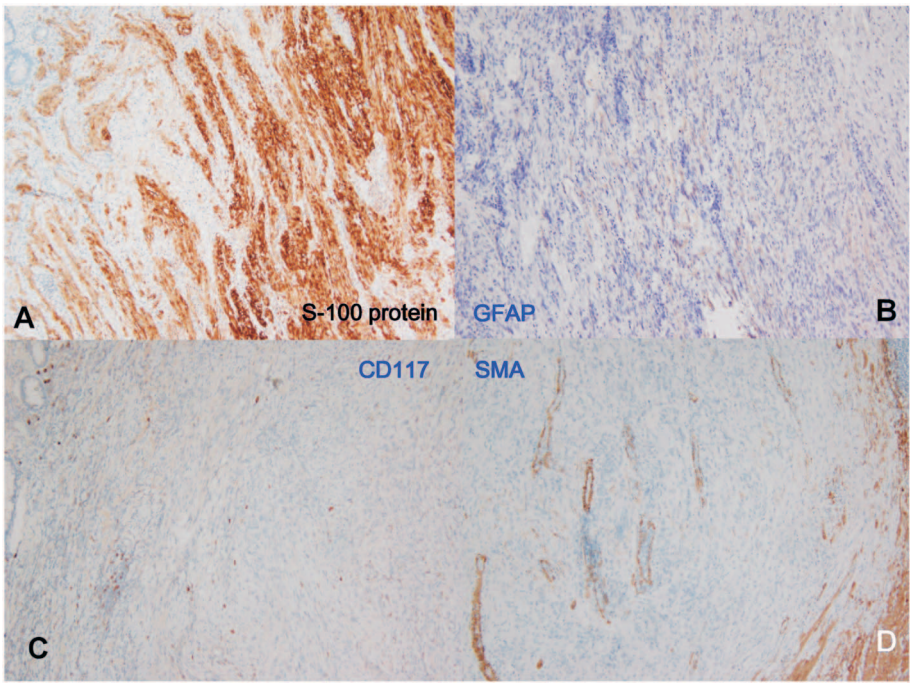

Fig. 3. Immunohisochemical staining findings showed diffuse and strong positivity for S-100 (A), GFAP (B), and negativity for CD117 (C), smooth muscle actin (D).

nomas is difficult because the colonoscopy usually cannot obtain sufficient specimens for immunohistochemical staining. Most schwannomas of the gastrointestinal tract consist of spindle cells, but epithelioid and plexiform variants have been seen. In tumors composed of spindle cells, leiomyomas, gastrointestinal stromal tumors (GISTs), neurofibromas, and schwannomas should be considered. Schwannomas usually show 100% positivity with S-100 protein, whereas neurofibromas show only 30% to 40% positivity. GISTs are positive for c-kit and negative for S-100 protein. Leiomyomas are positive for smooth muscle actin and desmin, and negative for S-100.[8,9] In our case, the immunohistochemical results revealed strong and diffuse positivity for S-100, and negativity for CD117, CD34, and smooth muscle actin. The results of immunohistochemical staining were compatible with the findings of a schwannoma.

Endoscopic ultrasonography-guided fine needle aspiration biopsy with immunohistochemical analysis has been used to obtain a preoperative diagnosis of GISTs, and the reported preoperative diagnostic accuracy ranged from 91% to 100%.[10] Endoscopic ultrasonography fine-needle aspiration biopsy may also be used in the diagnosis of schwannomas to obtain a preoperative definitive diagnosis. If preoperative diagnosis of a schwannoma can be confirmed, endoscopic submucosal dissection may be used for treatment.

Most colonic schwannomas are benign and grow slowly. Malignant gastrointestinal schwannomas have rarely been reported, but sometimes mimic malignant tumors.[11,12] The effect of chemotherapy and radiotherapy on schwannomas is uncertain. Incompletely resected schwannomas occasionally results in the transformation to malignant tumors. As preoperative definitive diagnosis is difficult, we cannot exclude the possibility of malignancy. Therefore, complete resection of the tumor with radical lymph node dissection is important, and usually results in a good prognosis.[13,14]

In conclusion, colonic schwannomas have benign characteristics and good outcomes. Immunohistochemical staining findings are very important for obtaining a definitive diagnosis. Surgical resection plays a major role in treating colonic schwannomas.

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病例報告

模仿癌症的橫結腸神經鞘瘤

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神經鞘瘤是一種少見的胃腸道間質腫瘤。這篇文章描述一個看起來像癌症的橫結腸神經鞘瘤，症狀主要是以血便來表現。這位 64 歲的女性，已經持續有兩個月的血便。大腸鏡發現橫結腸有一個腫瘤，病理切片呈現為急慢性發炎。在經過根治性右半結腸切除術後，術後病理報告為梭形細胞腫瘤。免疫組織染色呈現 S-100 為強烈廣泛性陽性，而對於 CD117、CD34 及 smooth muscleactin 為陰性。根據免疫組織染色結果，最後的病理診斷為橫結腸神經鞘瘤。

關鍵詞 神經鞘瘤、S-100。