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Case Report

The Giant Polipoid Lesion: Schwannoma of Sigmoid Colon

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Abstract

Sigmoid colonic schwannomas are very rare gastrointestinal tumors originating from Schwann cells. Primary schwannomas of the gastrointestinal tract are very rare and primarily benign. Furthermore, if they are not surgically excised, the malign transition can develop. We report a case of a 85-year-old woman who presented to our clinic with rectal bleeding and constipation. She underwent a colonoscopy. A giant polypoid lesion partially obstructing the lumen of the sigmoid colon was seen and biopsies were taken. Histopathological examination indicated suspicious non-specific epithelial cells and subsequently underwent sigmoid colon resection after preoperative evaluation by laboratory analysis and abdominal CT. Her postoperative course was eventful and she had anastomotic leakage on the fifth day. The histopathology report revealed ancient schwannoma of the sigmoid colon. This was a case of schwannoma that was treated with sigmoidectomy.

Keywords: *Schwannoma; Colonoscopy; Sigmoidectomy; Immunohistochemistry*

Background

A schwannoma is a kind of neoplastic lesion originating from Schwann cells, which form the neural sheath. The tumor can be originated from the peripheral nerves and seen mostly in the head, neck, and upper and lower limbs. The schwannoma of the sigmoid colon is very rarely diagnosed. Occasionally, schwannomas are benign and asymptomatic. Usually the complain of pain, rectal bleeding or any signs of colonic obstruction can be observed by symptomatic patients [1]. They have generally radical surgeries with margins free of resected colon. Additionally, the local recurrence and the malign degeneration could be observed [2]. We present a case of a 85-year-old woman with sigmoid colonic schwannoma that was detected on colonoscopy, who underwent sigmoidectomy and was histologically diagnosed.

Case Presentation

A 85-year-old female presented to our clinic with rectal bleeding and constipation. She underwent colonoscopy; a giant polipoid lesion at the sigmoid colon, covered by ulcerated mucosa that was obstructing the lumen partially, was seen, and multiple biopsies were performed.

Her history and physical examination revealed a lower abdominal tenderness; her comorbidities were hyper tension, coronary artery disease and diabetes mellitus. Laboratory findings included normal leucocyte 5.810/mm^3, haemoglobin: 11.8 g/dl, CA-15.3: 18,76 U/ml, CA-19.9 :1,42 U/ml, CA-125: 16,79 U/ml and carcinoembryonic antigen 2.75 ng/ml.

Abdominal CT revealed as suspicious sigmoid colon cancer which was showing intraluminal protrusion and causing narrowing of the lumen with multiple lengths of lymph nodes.

Histopathology of the endoscopic biopsy indicated suspiciously as non-specific epithelial cells. Then the patient underwent sigmoid colon resection and end to end anastomoses. On the fifth postoperative day, she had anastomotic leakage with severe septic signs. Subsequently we performed Hartmann procedure and ostomy was maintained at left side of abdomen. Unfortunately, at 9th day we lost the patient in our intensive care unit.

The histopathological examination of the resected polipoid lesion reported as a 6 × 4,5 × 3,5 cm schwannoma of the sigmoid colon with clear surgical margins. The twenty-five lymph nodes were revealed as reactive lymphoid hyperplasia. There was an ulceration on the mucosa and the serosa was intact without invasion (Figure 1). The immunohistochemical staining was performed. The tumor cells were negative for smooth muscle actin (SMA), desmin, CD 117, myoglobulin and pan cytokeratin (CK). The cells of the schwannoma are strongly immunoreactive to S-100 protein (Figure 2) and vimentin. Vascular structures were stained as positive with CD34. The specimen was diagnosed histopathologically as a schwannoma of the sigmoid colon (ancient schwannoma).

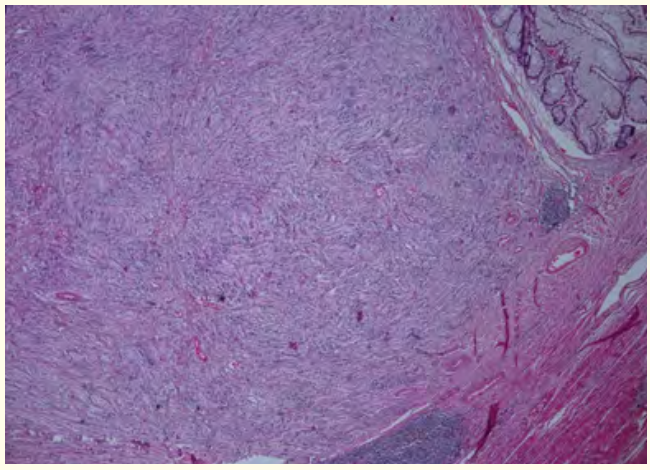

Figure 1: *The colonic mucosa side of tumor (H and E x10).*

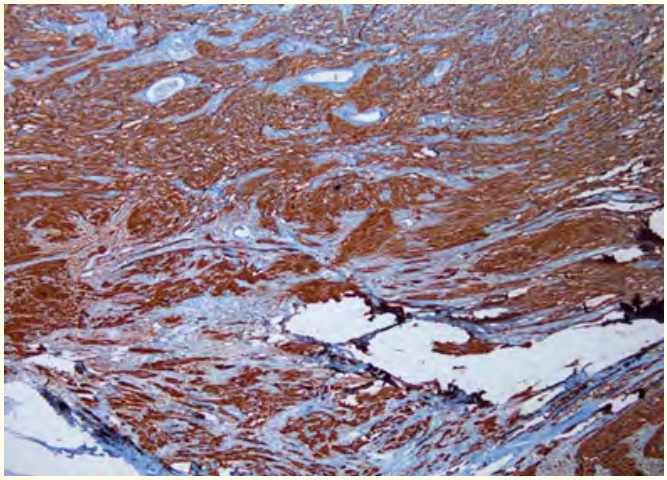

Figure 2: *Schwannoma area showing diffuse S100 positivity (x4).*

Discussion

Schwannoma originating from autonomous nerves of the digestive tract form a rare sort of stromal gastrointestinal tumors, approximately 1% of the digestive tract neoplasms. Schwannomas which are usually benign are neoplasms of ectodermic origin with presenting indolent growth. Both men and women are effected equally and can occur at any age, mostly after the sixth decade of life. The stomach and the small intestine are frequently involved by 83% and 12% of cases, respectively. Schwannomas of the colon and rectum which have no relation with von Recklinghausen disease are observed extremely rare [1-4]. Although they usually evolve asymptomatically, they may in some cases, as in our case, present bleeding and constipation.

Regarding Miettinen M they analyzed a series of 20 colorectal schwannomas similar to previously described as gastric schwannomas. Some of the schwannomas based on their phenotypic features were describes as variants of peripheral schwannomas (epithelioid schwannoma, plexiform schwannoma). The colonic schwannoma can occur in a wide age range. Similarly to GIST patients, the median age is 65 years. The colonic spindle cell schwannomas which is commonly in the cecum can present as intraluminal polyps with mucosal ulceration causing rectal bleeding [2].

Macroscopic appearance of schwannomas can be lobulated and well-delimited tumors with a cystic pattern and, rarely hard, solid, ulcerated or calcified. The cells of the schwannoma are immunoreactive to S-100 protein and vimentin, but are negative for SMA, desmin, CD 117, P53, myoglobulin and pan CK. Comparing to the diagnosis of gastrointestinal stromal tumour which has positivity to CD117 and CD34 but negativity to S-100 protein [4]. In addition to that the immunohistological findings of our case confirmed the S-100 protein positivity (Figure 2).

The Ki-67 proliferative index (MIB-1) is used as an indicator of malignancy, as its positivity (≥5%) shows the tumor aggressiveness and more than 10% is considered as a malignant. A high risk of metastasis and recurrence has association with a mitotic activity rate > 5 mitoses per field at high magnification and a tumor size bigger than 5 cm. Benign lesions have a low rate of mitosis without atypical mitotic figures and nuclear hyperpigmentation [1].

Furthermore, the growth of schwannoma is slow, but it is better to remove before the possibility of malignant degeneration. Commonly the histopathological examination of preoperative colonoscopic biopsy may be difficult for schwannoma and immunohistochemistry can be necessary to diagnose schwannoma accurately [5]. In our case, it was difficult to diagnose histopathologically the schwannoma, because of colonoscopic biopsy specimen which included hyperchromatic nucleus in leucocytes and non-specific epithelial cells. Accurate diagnosis of these benign cases can be sometimes difficult prior to surgical intervention. That is the main reason to decide radical surgery as a treatment option like in the case of a primary adenocarcinoma with synchronous schwannoma [3].

The best therapeutic approach is the surgical resection of the tumor with free margins. Currently, the tumor size, location and suggested histopathological findings manage the surgery. The effectiveness of radiotherapy or adjuvant chemotherapy has not been shown yet. Nevertheless, despite radical surgeries, the colonic schwannoma can maintain with a high rate of local recurrence and malignant degeneration. Then, the choice of treatment will be few and not enough for good prognosis [1,6]. We accomplished the fields of surgical decision and postoperative immunohistochemical managements in our case, however, it was hard to report exact diagnosis histopathologically subsequent to colonoscopy.

Conclusion

As a conclusion, sigmoid schwannoma is a very rare tumor, whose diagnostic approach and treatment still maintain uncertain. Evidently, it has become essential that the histological identification of the tumor followed by a radical surgical resection is the main option.

Conflict of Interest Statement

The authors declare no conflict of interest with any organizations.

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