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# The Multiple Benign Unclassified Mucosal Polyps (BUMPs) in the Colorectum: A Rare Case Report

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## Abstract

**Background:** There are several benign, many spindle cells involving the mucosa and /or submucosa in the gut. These include perineurioma, Schwann cell hamartomas, ganglioneuromas, leiomyomas, inflammatory fibrous polyps, granular cell tumors, and benign unclassified mucosal polyps (BUMPs).

**Results:** We report the multiple BUMPs of the colorectum. A 61-year-old woman performed the colonic fiber, because of the following-up of a gastrointestinal stromal tumor (GIST). The biopsy, cold snare polypectomy, and endoscopic mucosal resection of the colon or rectum were done. Histologically, these lesions were the proliferation of plump, uniform spindle cells with eosinophilic cytoplasm, indistinct cell borders, and bland nuclei without mitoses. Immunohistochemically, the tumor cells were positive for vimentin, but negative for epithelial membranous antigen (EMA), S-100, a-smooth muscle actin (a-SMA), Desmin, GLUT-1, Claudin-1, and type IV collagen.

**Conclusion:** The BUMPs may be the most common mesenchymal polyps. This is a "wastebasket" designation. There are no multiple BUMPs of the colorectum in the English literature. The phenomenon may be related to some syndrome.

## Introduction

Benign mesenchymal polyps of the gastrointestinal tract are a group of unusual and interesting lesions. These include perineuriomas [1], Schwann cell nodules [2], ganglioneuromas [3], leiomyomas of the muscularis mucosae [4], and smooth muscle hamartoma [5], inflammatory fibroid polyps [6], and granular cell tumors [7,8].

Benign unclassified mucosal polyps (BUMPs) of the colorectum (CR) are a recently proposed type of benign mesenchymal polyp [9]. This is a "wastebasket" designation, which probably only exists at the University of Michigan Hospital; because all of the benign polyps have not yet been given names in the literature. As more of these are seen and people write about them, it is likely that many of these polyps will be given proper names and no longer fit in the BUMP category. The perineurioma and Schwann cell hamartoma used to be in this category before they were rescued from oblivion. The histology of these polyps is highly varied, likely because these are really many different types of proliferations. They can have spindled cells of various types, adipocytes, blood vessels of all shapes and sizes, and any type of stroma, including collagenous, elastic, and myxoid. However, little is known about the pathogenesis of the BUMPs of the CR.

In the current report, we present pathological features of multiple BUMPs of the CR in an adult senior woman. There are no multiple BUMPs of the colorectum in the English literature. The phenomenon may be related to some syndrome.

## Case report

A 61-year-old Japanese woman visited a surgical clinic of Shimada General Medical Center, Shimada, Shizuoka, Japan, because of a following-up of gastric GIST. Her laboratory data showed normal. Computed tomography showed no obvious metastases. She performed the colonic fiber. The sessile-polypoid 5 mm in size polyp of the descending colon, the sessile 2 mm in size polyp of the sigmoid colon, and the sessile 2 mm in size of the rectum were identified (**Figure 1**). The endoscopic mucosal resection, cold snare polypectomy, and biopsy of the colon or rectum were done.

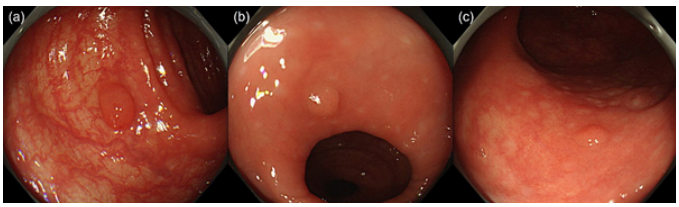


Figure 1: Clinical imaging. (a) Colonic endoscopy reveals a small sessile-polypoid polyp, 5 mm in size, in the descending colon. (b) Colonic endoscopy reveals a small sessile polyp, 2 mm in size, in the sigmoid colon. (c) Rectal endoscopy reveals a small sessile polyp, 2 mm in size, in the rectum.

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Histologically, these lesions were a proliferation of plump, uniform spindle cells with eosinophilic cytoplasm, indistinct cell borders, and bland nuclei without mitoses (**Figure 2**). Immunohistochemically, the tumor cells were positive for Vimentin, but negative for EMA, S-100, **α**-SMA, Desmin, GLUT-1, Claudin-1, and type IV collagen (**Figure 3**).

Ultrastructural or genetic examinations were not performed.

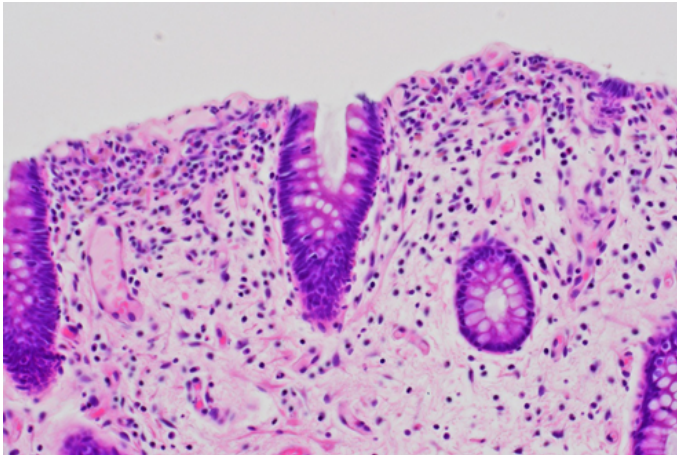

Figure 2: Microscopic findings of the BUMP. This lesion is the proliferation of plump, uniform spindle cells with eosinophilic cytoplasm, indistinct cell borders, and bland nuclei. Mitotic activity is not seen. No serrated glands or no atypical glands are observed (HE).

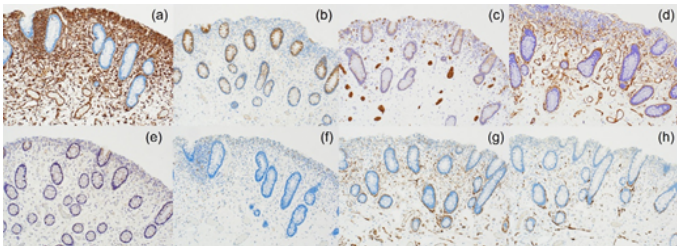


Figure 3: Immunohistochemical findings of BUMP (a–h). (a) Vimentin, (b) EMA, (c) GLUT-1, (d) type IV collagen, (e) Claudin-1, (f) S-100, (g) SMA, and (h) Desmin.

## Discussion

It has been proposed that the BUMPs of the CR are a common benign mesenchymal polyp [9]. This is a "wastebasket" designation. The perineurioma and Schwann cell hamartoma used to be in this category before they were rescued from oblivion. Pathology is the gold standard for the diagnosis of the BUMPs of the colorectum. Microscopically, they can have spindled cells of various types, adipocytes, blood vessels of all shapes and sizes, and any type of stroma, including collagenous, elastic, and myxoid [9]. The current case fulfilled these criteria. We found significant differences between the current three lesions in histopathologic findings.

Therefore, it is a definite fact that these tumors are BUMPs. This study reports that there is a rarely case of multiple BUMPs of CR. In addition, when multiple tumors occur in the CR, we usually consider the possibility of hereditary colorectal polyposis; such as familial adenomatous polyposis [10], Lynch syndrome [11], or hamartomatous polyposis [12], and also the possibility of non-hereditary colorectal polyposis; such as inflammatory polyposis [13].

However, in this case, there was no clear family history of BUMPs. The pathogenesis of the hereditary predisposition remains poorly understood. Because the specimens were micro fractions, so they could not be used to search for germline mutations. And also, there is no evidence or symptoms of ulcerative colitis. Therefore, it is a low possibility of inflammatory polyposis. To our best knowledge, this is the first report of the multiple BUMPs of the CR in the English literature.

Limitations of our current case report include the fact that it was a single case from a single institution in Japan and that the genetic testing described above was not available. We hope that the concept of this disorder will spread among gastroenterologists, surgeons, and pathologists, and that multi-institutional studies will be conducted in the future.

In conclusion, we propose that there are multiple BUMPs of CR. The BUMPs may be the most common mesenchymal polyps. This is a "wastebasket" designation. There are no multiple BUMPs of the CR in English literature. The phenomenon may be related to some syndrome. It is that these lesions are associated with hereditary or non-hereditary disorders. Our findings will provide new insights into the understanding of the pathogenesis of the BUMPs of the CR.

## Data availability

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

## Disclosure

The findings were to be presented at the 111th Spring Annual Meeting of the Japanese Society of Pathology in Kobe, Japan, 2022.

## Ethics approval statement

All the procedures were in accordance with the ethical standards of the responsible institutional committee on human experimentation and with the Helsinki Declaration of 1964 and later versions. The patient gave written informed consent to publication as a case report.

## Conflict of interest

The authors declare that there is no conflict of interest regarding the publication of the present study.

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## Author contributions

Each author has participated sufficiently in the work to take public responsibility for appropriate portions of the content: MT performed a histopathological diagnosis of the resected samples, analyzed the data, drafted the figure, and made a major contribution to writing the manuscript. TU performed clinical evaluations, surgical treatment, and clinical follow-up. All authors read and approved the final manuscript.

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