

## CLINICAL VIGNETTE

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# Colonic Perineurioma Masquerading as Rectal Polyp

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**Keywords:** Fibroblastic polyp, Colonic perineurioma, serrated polyp

### Introduction

Perineurioma is a small intramucosal lesion often encountered in the distal colon. Eslami-Varzaneh, et al first reported perineuriomas as “benign fibroblastic polyps” within the colon.<sup>1</sup> The lesion is characterized by stromal spindle cells that express perineural markers.<sup>2</sup> These lesions are benign and are associated with serrated crypts seen in hyperplastic polyps.<sup>2</sup> Patients often present asymptotically during routine screening colonoscopy. The lesions are often seen distal to the splenic flexure and described by the endoscopist as sessile.<sup>3,4</sup> Here, we present a case of a patient who underwent surveillance colonoscopy and found to have a diminutive solitary rectal lesion histologically identified as a colonic perineurioma.

### Case

A 37-year-old woman was seen for colon cancer surveillance. She has a family history of colon cancer in maternal aunt and brother who was recently diagnosed with colon cancer in his early 40s. She reports mild constipation treated with over-the-counter medications with relief and no other gastrointestinal symptoms or concerns. Her medical history was notable for major depressive disorder and obesity. She was taking Fluoxetine 20 mg daily for depression and no other over the counter medications or supplements.

Due to her family history of colon cancer, she underwent a colonoscopy at age 37. Her colonic mucosa and terminal ileum were normal. Two diminutive sessile 1-2 mm polyps were removed in the rectum. On histologic examination, one of the polyps, 2 mm in size was revealed to be a colonic perineurioma (Figure 1). Immunohistochemical staining was not performed on pathology specimens. She will undergo repeat surveillance colonoscopy in 5 years.

### Discussion

Perineurioma, previously described as fibroblastic polyp are a type of mesenchymal polyp of the colorectum.<sup>1</sup> They are uncommon but also underrecognized lesions of the colon. They are characterized by proliferation of the spindle cells within the mucosa leading to the separation of the colonic crypts.<sup>5</sup> These result in serration of the colonic crypts, which resemble hyperplastic polyps histologically.<sup>2</sup>

Perineuriomas were first described as benign fibroblastic polyps of the colon in 2004.<sup>1</sup> A subsequent case series of intestinal perineuriomas reported the similarities in morphology with fibroblastic polyps.<sup>4</sup> In 2006, expression of perineural immunohistochemical markers were noted in cases of fibroblastic polyps.<sup>6</sup> Zamecnik, et al suggested that fibroblastic polyps should be reclassified as perineuriomas.<sup>6</sup>

There is a moderate female predominance.<sup>5</sup> The mean age at diagnosis is around 60 years.<sup>6</sup> The indications for colonoscopy in case series is routine colonoscopy in 69% of patients, surveillance colonoscopy in 4% of patients, and gastrointestinal bleeding or occult blood in 13% of patients.<sup>6</sup> Other indications include change in bowel habit, diarrhea, and abnormal imaging of the gastrointestinal tract with thickening of the colonic bowel wall.<sup>6</sup>

Endoscopically, perineuriomas are solitary lesions described as polyps.<sup>5</sup> They are benign lesions of the colon that occur almost exclusively in the sigmoid colon and rectum.<sup>3</sup> About 15% of cases are in the proximal colon.<sup>6,7</sup> Lesions are often less than 10 mm in size with the average size of 4.1 mm. Interestingly, cases series report many perineuriomas appear within the vicinity of hyperplastic polyps and resemble them histologically.<sup>1</sup> It is thought that perineuriomas with serrated glands may be reported as hyperplastic polyps.<sup>5</sup>

Histologically the polyp appears to show mucosal proliferation of uniform spindle cells within the lamina propria. This causes serration of colonic crypts. However, pleomorphism, mitotic figures or necrosis were not common histologic features.<sup>1</sup> Immunohistochemically, over 85% of cases have expression of GLUT1 and claudin 1.<sup>4</sup> Desmin and C-Kit (CD117) were negative in all cases.<sup>8</sup> Immunohistochemical stains were also negative in all perineurioma cases for cytokeratins, h-caldesmon, CD31, BCL2, cyclin D1, CD21, CD23 and CD 35.<sup>9</sup> These exclude inflammatory myoglandular polyps and gastrointestinal stromal tumors (GIST) respectively.<sup>8</sup> About 63% of perineuriomas demonstrate BRAF mutations.<sup>9,10</sup> These mutations are associated with serrated architecture and non-serrated perineuriomas appear to lack mutations in BRAF.<sup>3</sup> Non-serrated perineuriomas have a perineurial stromal proliferation without serration of the epithelium.<sup>3</sup> Hemosiderin deposition in

the lamina propria which occurs in other inflammatory polyps with serrated crypts, is also thought to be a feature of colonic perineuriomas.<sup>9</sup>

### Conclusion

Colonic perineuriomas are benign diminutive sessile colonic polyps. They represent a distinct histopathologic entity in the distal colon, whose origin is still unclear. It shares histopathologic features with serrated colonic polyps. Wider recognition and familiarity with this lesion will allow for better characterization and definition of benign colonic lesions.

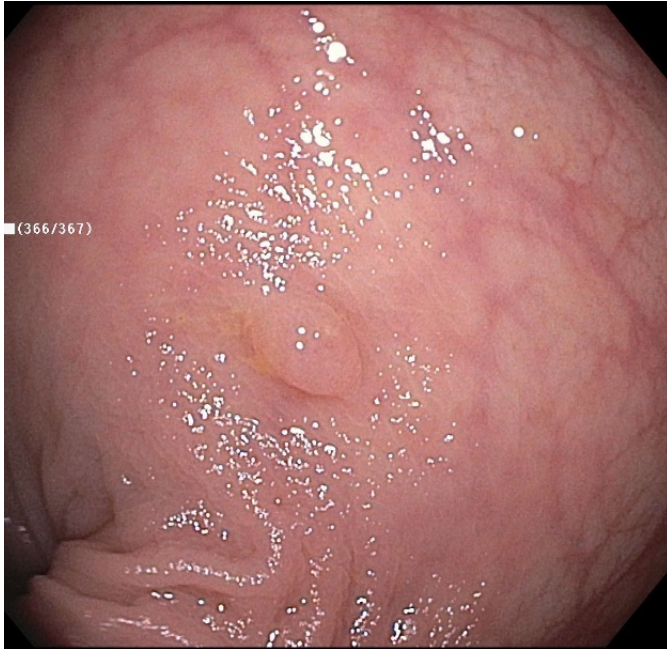


Figure 1.

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