

Diagnostic Significance of Rare Colorectal Perineurioma Found on Colonoscopy: A Case Report

Sami Mesgun BS¹, Blaine Massey DO², Jose Aponte-Pieras MD³, Joseph Fayad MD⁴

¹ Kirk Kerkorian School of Medicine at the University of Nevada, Las Vegas

² Department of Internal Medicine, Kirk Kerkorian School of Medicine at the University of Nevada, Las Vegas

³ Department of Gastroenterology and Hepatology, Kirk Kerkorian School of Medicine at the University of Nevada, Las Vegas

⁴ Department of Gastroenterology and Hepatology, VA Southern Nevada Healthcare System



Introduction

- Perineuriomas are benign spindle cell neoplasms of the peripheral nerve sheath which seldom involve the GI tract.¹
- Colorectal perineuriomas have an incidence of 0.1%-0.46% of all colonic polyps, usually occurring in the sigmoid colon and rectum, and are often diagnosed incidentally on routine screening colonoscopy.²
- They are not associated with neurofibromatosis syndromes (NF1-2) and require no additional follow up.³
- Herein, we describe a case of colonic mucosal perineurioma of a patient referred for colonoscopy after a positive gFOBT.

Case Presentation

- A 57-year-old male with hypertension and dyslipidemia presented after a positive gFOBT. He was asymptomatic and physical examination was unremarkable.
- Labs notable for Hgb of 13.5 g/dL and a low-normal MCV of 80.1 μm^3 .
- Colonoscopy revealed a 2-mm sessile rectosigmoid polyp (Figure 1), which underwent cold snare polypectomy.
- Histopathology notable for bland spindle cells with small elongated nuclei and imperceptible cell borders. No significant nuclear atypia or mitotic activity was identified.
- Immunohistochemistry (IHC) showed focal epithelial membrane antigen (EMA) staining of stromal cells; S100 stain was negative. Findings are consistent with perineurioma.
- Remainder of colonoscopy only showed multiple subcentimeter tubulovillous and tubular adenomas of the right colon.

Imaging

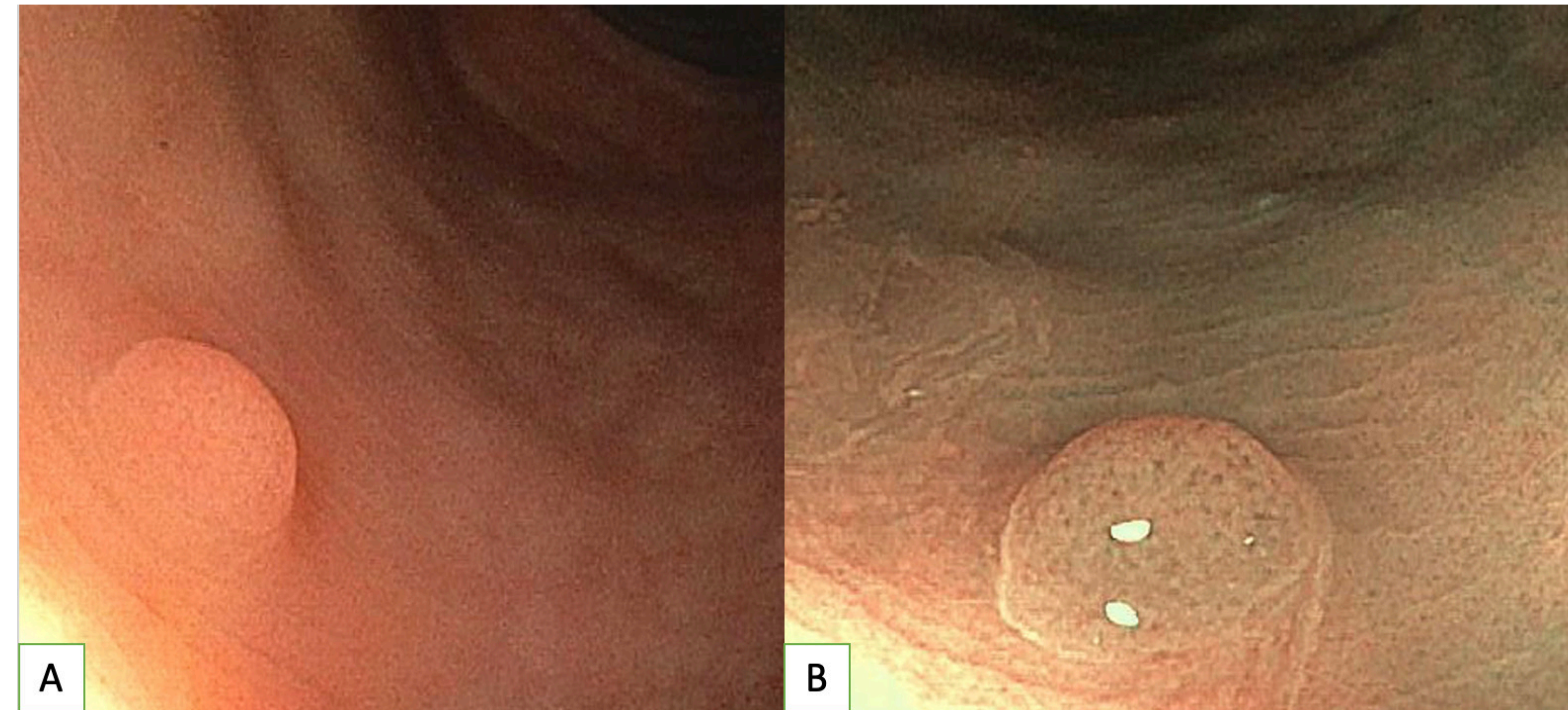


Figure 1

A. Colonoscopy showing a 2-mm sessile rectosigmoid polyp, confirmed as a perineurioma on pathology

B. Closer image of the same perineurioma, visualized using Narrow Band Imaging (NBI)

Discussion

- Perineuriomas are more common in females with a median age of 51.⁵
- Histologically, they appear as uniformly elongated spindle cells with rare mitotic activity.³
- IHC shows diffuse, strongly positive staining of spindle cells with GLUT1 and claudin 1 and focal or faintly positive EMA staining.^{3,4} Two of the three positive stains generally support the diagnosis.³
- Colorectal perineuriomas lack S100 protein expression unlike other soft tissue neuromas such as schwannomas and neurofibromas.^{3,4}
- Perineuriomas may resemble malignant neoplasms such as gastrointestinal stromal tumors which are histologically similar but stain positive for c-kit/CD117 and DOG-1.^{4,5}

Conclusion

- We describe the clinicopathologic features of a perineurioma of the rectosigmoid colon of a patient referred for colonoscopy after a positive gFOBT.
- Colorectal perineuriomas typically appear as small, solitary sessile polyps <6 mm in diameter (median 4 mm).^{1,2}
- We highlight the importance of correct diagnosis of colonic perineuriomas in order to avoid overtreatment.
- Perineuriomas do not recur after excision, and given their benign nature, do not require surveillance after polypectomy.²

References

1. van Wyk AC, van Zyl H, Rigby J. Colonic perineurioma (benign fibroblastic polyp): case report and review of the literature. *Diagn Pathol.* 2018;13(1):16. doi:10.1186/s13000-018-0694-z
2. Jama GM, Evans M, Fazal MW, Singh-Ranger D. Perineurioma of the sigmoid colon. *BMJ Case Rep.* 2018;2018:bcr2018227170. Published 2018 Sep 27. doi:10.1136/bcr-2018-227170
3. Macarenco RS, Ellinger F, Oliveira AM. Perineurioma: a distinctive and underrecognized peripheral nerve sheath neoplasm. *Arch Pathol Lab Med.* 2007;131(4):625-636. doi:10.5858/2007-131-625-PADAUP
4. Motta F, Spadola S, Bosco A, Aprile G, Piombino E, Magro G. Perineurioma of the colon: an uncommon tumor with an unusual location. Report of a case and review of the literature. *Pathologica.* 2018;110(2):111-115.
5. Hornick JL, Fletcher CD. Intestinal perineuriomas: clinicopathologic definition of a new anatomic subset in a series of 10 cases. *Am J Surg Pathol.* 2005;29(7):859-865. doi:10.1097/01.pas.0000154130.87219.2c

Contact: Blaine L. Massey, DO (PGY-2, Internal Medicine)
Kirk Kerkorian School of Medicine at UNLV
Email: blaine.massey@unlv.edu
Phone: 208-871-1864