International Case Reports Journal
Case Report (ISSN: 2770-9647)

Giant Hyperplastic Polyp with No Malignant Features

Joanna M. Lenik[1*], Yvette Achuo- Egbe[2], Jennifer M. Harley[2], Jean Atallah- Vinograd[2]

[1]Department of Internal Medicine, NYC H+H/ Metropolitan Hospital, NY, and New York Medical College, Valhalla, NY, USA

[2]Department of Gastroenterology, NYC H+H/ Metropolitan Hospital, NY, and New York Medical College, Valhalla, NY, USA

ABSTRACT

Introduction: Hyperplastic Polyps (HPs) are a benign subgroup of serrated polyps. HP larger than 10 mm is considered a large polyp and larger than 2 cm carry a risk for malignancy. A case of near obstructing giant hyperplastic polyp of the recto-sigmoid colon with no malignant features is presented with review and proposed follow-up.

Case Report: A 29-year-old African American man with a 1-year history of persistent dyspepsia and epigastric pain with associated intermittent rectal bleeding and weight loss. Endoscopies identified a large pedunculated mass with near-complete obstruction in the recto-sigmoid colon. Biopsies show hyperplastic mucosa with no evidence of malignancy. Imaging revealed a 6cm colonic mass. Tumor markers were unremarkable. Laparoscopic sigmoid resection was performed. Histology reported a giant serrated polyp with hyperplasia and no evidence of malignancy.

Discussion: HPs are now believed to be a subgroup of Serrated Polyps (SPs). SPs are sub-classified based on malignant potential. The majority of the serrated carcinomas arising from HP follow BRAF and KRAS pathways. Microsatellite instability has also been associated. Serrated polyposis syndrome is associated with the risk of colorectal cancer. Parallel to the polyp size increases the malignant potential. Risk stratification of giant, pedunculated polyps is advised prior to endoscopy due to the risk of perforation and bleeding.

Conclusion: Further discussions are needed to establish clear guidelines for surveillance of single, giant, non-malignant polyps. We propose our own management including surgical *vs.* endoscopic resection, genetic testing, and colonoscopy in 1,3, and 5- year intervals, followed by standard surveillance.

Keywords: Hyperplastic Polyp; Epigastric pain; Endoscop; Malignant

Citation: *Joanna M. Lenik, Yvette Achuo- Egbe, Jennifer M. Harley, Jean Atallah- Vinograd. Giant Hyperplastic Polyp with No Malignant Features. Int Case Rep Jour. 2022;2(6):1-6.*

Received Date: 4 May, 2022; **Accepted Date:** 8 May, 2022; **Published Date:** 10 May, 2022

[*]**Corresponding author:** Joanna M. Department of Internal Medicine, NYC H+H/ Metropolitan Hospital, NY, and New York Medical College, Valhalla, NY, USA

International Case Reports Journal
Case Report (ISSN: 2770-9647)

INTRODUCTION

Hyperplastic polyps (HPs) are a benign subgroup of serrated polyps. HP larger than 10 mm is considered a large polyp and larger than 2 cm carry a risk for malignancy. A case of near obstructing giant hyperplastic polyp of the recto-sigmoid colon with no malignant features is presented with a topic review and proposed further follow-up.

CASE REPORT

A 29-year-old African American man presented to the gastroenterology clinic with a 1-year history of persistent dyspepsia and epigastric pain not responding to symptomatic management with proton pump inhibitors. He was an active marijuana smoker and his comorbidities included seizure disorder. He described intermittent rectal bleeding of 1-year duration with alteration in bowel habits fluctuating between small and large bowel movements, anorexia, and 10- pound weight loss. He denied experiencing diarrhea or constipation. He had no family history of gastrointestinal disorders or cancer but stated a history of lymphoma in his father. He has not been treated with anticoagulation or antiplatelet therapy. Physical exam did not disclose any abnormalities. The patient refused a digital rectal examination. Laboratory investigations were unrevealing.

The patient underwent esophagogastroduodenoscopy (EGD) and colonoscopy three weeks later. EGD showed gastritis. Colonoscopy revealed a large pedunculated mass with near-complete obstruction identified in the rectosigmoid colon at the 22 cm mark [Figure 1A]. The mass was traversed with the upper endoscope to the ileocecal valve. Tattoo was placed anterior to the stalk and posterior to the mass. Biopsies were obtained. Histology including the frozen specimen revealed hyperplastic colon mucosa with no evidence of a malignant process. 2 diminutive hyperplastic polyps were completely resected from the sigmoid colon and rectum. Overall bowel prep was fair. CT imaging of the abdomen and pelvis was obtained and revealed distal colonic mass extending over 6 cm segment with near-complete occlusion of the lumen, associated with thickening of the wall and edema [Figure 1B] with adjacent sub centimeter lymph nodes in the left pelvic wall, and bilateral lymphadenopathy of axillary regions. Carcinoembryonic Antigen (CEA) and cancer antigen 19-9 (CA 19-9) tumor markers were unremarkable (3.8 ng/ml and 4 U/mL). Ten days later, the patient underwent colonoscopy with neonatal scope to complete evaluation and re-biopsy of the mass. There were no synchronous lesions. Additional biopsies of the mass were taken with cold forceps. Patient was evaluated by general surgery and underwent laparoscopic sigmoid resection with end-to-end anastomosis. Ten lymph nodes were obtained for evaluation. Subsequent pathological exam of the mass reported pedunculated polyp measuring 2.5 x 2.5 x 1.8 cm and 2 cm stalk, serrated appearance with presence of hyperplasia without evidence of malignancy [Figure 1C]. No demonstrable pathology of the lymph nodes. Postoperative course was uneventful, with improvement in appetite and weight gain. Genetics evaluation deferred further testing.

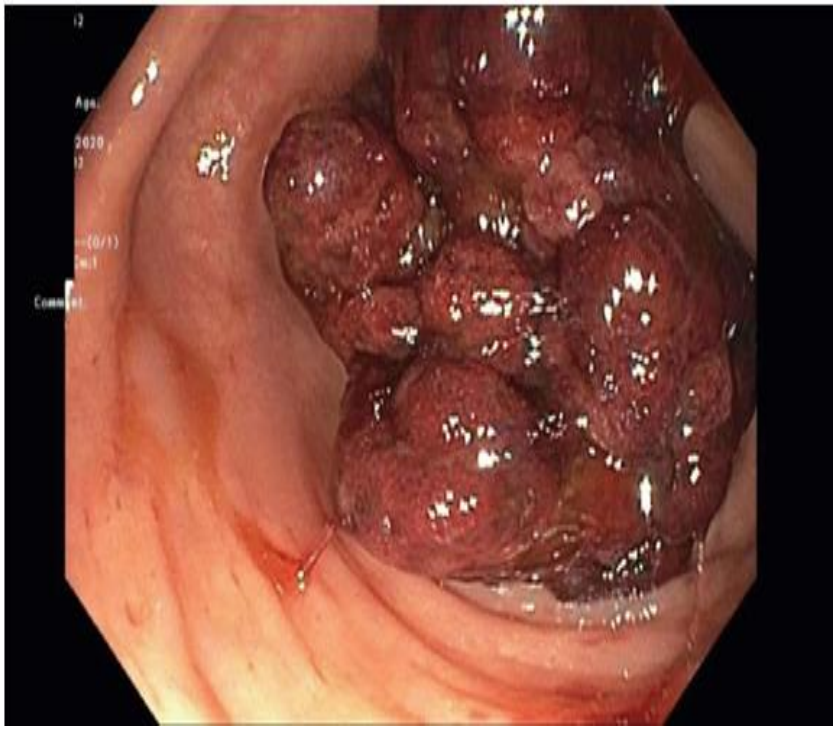

Figure 1A: Colonoscopy image showing large pedunculated mass with near complete obstruction of the rectosigmoid colon.

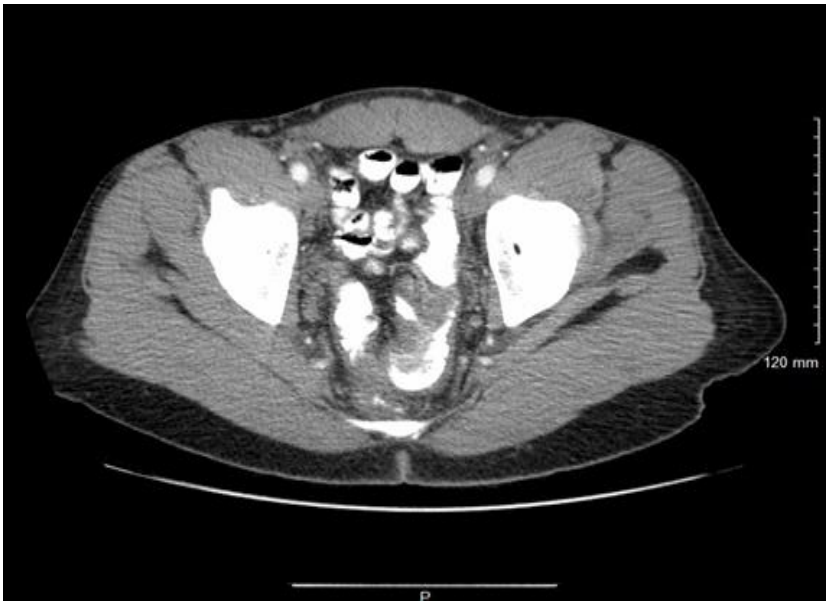

Figure 1B: Computer tomography of the distal colonic mass.

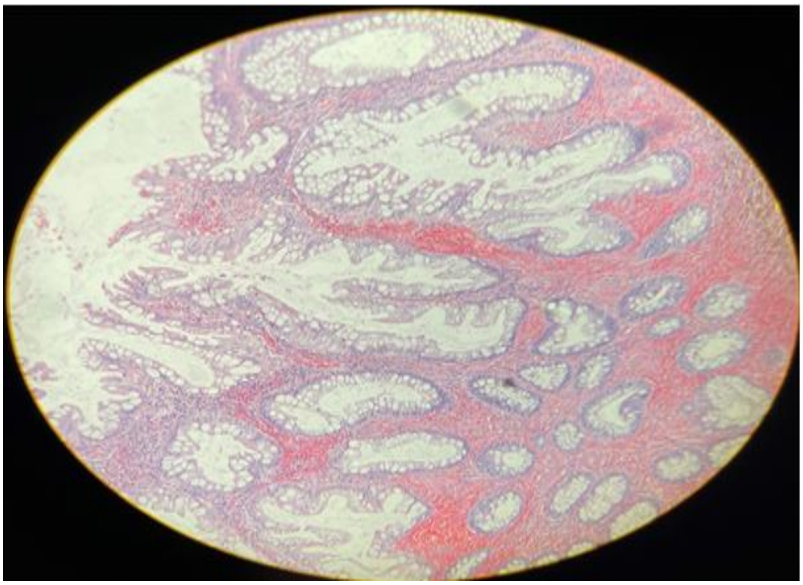

Figure 1C: Cross-section histology slide showing pedunculated serrated polyp with hyperplasia without evidence of malignancy.

DISCUSSION

Colorectal polyps are histologically classified as neoplastic and non-neoplastic, which comprises hyperplastic polyps, sessile serrated polyps, traditional serrated polyps, and conventional adenomas. HPs are the most abundant type and until recently were considered as an entirely separate and benign group, now believed to be a subgroup of Serrated Polyps (SP). SPs are derived from their histological "saw-tooth" folded appearance of colonic epithelium and classified by the World Health Organization (WHO) into two main subgroups based on their malignant potential; non- dysplastic polyps, which includes HP and sessile serrated adenomas/ polyps (SSA/P), and dysplastic polyps divided into Traditional Serrated Adenomas (TSA) and sessile serrated adenomas/ polyps with dysplasia.[1]

HPs are typically diminutive (< 5mm), sessile or flat and usually found in the left colon and rectum. Polyps that are 1 cm in diameter are considered large, and those exceeding 3 cm are classified as giant polyps. Removal of these large polyps may be challenging. Lesions larger than 1.5 cm, flat or with lateralization of spread, confined to the right colon and cecum or near- haustra make them difficult to remove.[2] Although sessile lesions have been associated with post- polypectomy bleeding, consideration should be given to the giant, pedunculated polyps whose thick stalk may contain large vessels increasing the risk of perforation or bleeding associated with its removal.[3]

The malignant potential is parallel to the size of HPs. Large hyperplastic lesions may carry a risk of dysplasia and malignant degeneration. Most of the neoplastic tumors arising from HPs follows the BRAF and KRAS pathway. Also, microsatellite instability has been associated with Serrated Polyposis Syndrome (SPS), similarly like in the Lynch syndrome, hence due to the inability of subtracting a single responsible gene, other well-defined syndromes

should be excluded in all patients in whom a diagnosis of Serrated Polyposis Syndrome (SPS) is made.[4] HP can be further divided into goblet cell-rich (GCHP), mucin-poor variants, and microvesicular (MVHP).[5] The latter often have BRAF mutation making it a possible precursor for SSA/P, whereas GCHP can exhibit abnormalities in KRAS oncogene [6] giving them both potential for progression into serrated carcinomas.

SPS was previously known as hyperplastic polyposis syndrome. The 2019 WHO updated diagnostic criteria for SPS is defined by presence of five or more serrated lesions/polyps proximal to the rectum, all being at least 5 mm in size, with two or more being at least 10 mm in size, or more than 20 serrated lesions/polyps of any size distributed throughout the large bowel, with at least five being proximal to the rectum.[7,8] SPS is associated with an increased risk of Colorectal Cancer (CRC), although the magnitude of the risk remains uncertain. Although intensive endoscopic surveillance for CRC prevention is advised, predictors that identify patients who have high CRC risk remain unknown. Current international guidelines recommend surveillance intervals of 1-2 years.[4]

There are very few cases of giant gastrointestinal polyps in currently available literature and most of them are confined to the upper GI tract. Reports on the giant polyps of the colon are scarce and majority of cases describes malignant or inflammatory masses. Considering the atypical features of our case being a single polyp, its size, and lack of malignant features, there are no current guidelines under which it clearly falls. Due to the concern for malignant transformation with obstructive signs and symptoms, surgical excision was advised. Patient was evaluated for need for genetic testing and no further investigation was recommended.

CONCLUSION

Single, giant, benign colorectal polyps are rare, hence there are no clear guidelines for surveillance of such cases. Further discussions are needed to establish clear guidelines for testing and surveillance intervals to ensure close and safe follow-up of single, giant, non-malignant polyps. We propose our own management including surgical vs. endoscopic resection, genetic testing, and surveillance colonoscopy in 1,3 and 5- year intervals, followed by the standard surveillance protocol.

REFERENCES

1. Sweetser S, Smyrk TC, Sinicrope FA. Serrated Colon Polyps as Precursors to Colorectal Cancer. Clin Gastroenterol Hepatol. 2013;11(7):760-767.
2. Herszényi L. The “Difficult” Colorectal Polyps and Adenoma: Practical Aspects. Dig Dis 2019;37(5):394-399.
3. Corte CJ, Burger DC, Horgan G, Bailey AA, East JE: Postpolypectomy Haemorrhage Following Removal of Large Polyps Using Mechanical Haemostasis or Epinephrine: A Meta-Analysis. United European Gastroenterol J. 2014;2(2):123-130.

4. Kevin J Monahan, Nicola Bradshaw, Sunil Dolwani, Bianca Desouza, Malcolm G Dunlop, James E East, et al. Guidelines for The Management of Hereditary Colorectal Cancer from The British Society of Gastroenterology (BSG)/Association of Coloproctology of Great Britain and Ireland (ACPGBI)/ United Kingdom Cancer Genetics Group (UKCGG). Gut .2020;69:411-444.
5. Emina Torlakovic, Eva Skovlund, Dale C Snover, Goran Torlakovic, Jahn M Nesland. Morphologic Reappraisal of Serrated Colorectal Polyps. Am J Surg Pathol. 2003;27(1):65-81.
6. Yang S, Farraye FA, Mack C, Posnik O, O'Brien MJ. BRAF and KRAS Mutations in Hyperplastic Polyps and Serrated Adenomas of The Colorectum: Relationship to Histology and CpG Island Methylation Status. Am J Surg Pathol. 2004;28(11):1452-9.
7. Gautam Mankaney, Carol Rouphael, Carol A Burke. Serrated Polyposis Syndrome. Clin Gastroenterol Hepatol. 2020;18(4):777-779.
8. Kevin Sweet, Joseph Willis, Xiao-Ping Zhou, Carol Gallione, Takeshi Sawada, Pia Alhopuro, et al. about "Molecular Classification of Patients With Unexplained Hamartomatous and Hyperplastic Polyposis". JAMA. 2005;294(19):2465-73.