CRCP Case Reports in Clinical Practice

Case Report

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A Solitary Rectal Retention Polyp in an Adult Patient with Ulcerative Colitis: A Case Report

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Citation Ahmadifar A, Imani H. A Solitary Rectal Retention Polyp in an Adult Patient with Ulcerative Colitis: A Case Report. Case Reports in Clinical Practice. 2026; 11(2): 71-75. DOI:10.18502/crcp.v11i2.22385

Running Title Solitary Rectal Retention Polyp and Ulcerative Colitis

Article info:
Received: March 1, 2026
Revised: April 8, 2026
Accepted: April 21, 2026

Keywords:
Solitary rectal polyp; Retention polyp; Juvenile polyp; Ulcerative colitis; Endoscopic mucosal resection

ABSTRACT

Retention polyps, also known as juvenile polyps, are non-neoplastic hamartomatous lesions. Their occurrence in adults is rare, and finding a solitary retention polyp in a patient with underlying inflammatory bowel disease (IBD) is exceptionally uncommon. We report the case of a 42-year-old male with a 9-year history of ulcerative colitis, currently in clinical and endoscopic remission (Mayo Endoscopic Score 1) on mesalamine therapy. During a routine surveillance colonoscopy, a solitary, asymptomatic, 15 mm sessile polyp with a smooth, cystic appearance was discovered in the rectum. The lesion was removed via endoscopic mucosal resection (EMR). Histopathological evaluation revealed no evidence of dysplasia or malignancy, confirming the diagnosis of a retention polyp.

Although rare, retention polyps should be considered in the differential diagnosis of solitary polyps in adult patients with UC. Complete endoscopic resection and precise histopathological examination are essential to rule out dysplasia and guide appropriate management.

Introduction

Colorectal polyps are common findings during endoscopy, representing a diverse group of lesions with varying histological features and malignant potential [1]. Among these, retention polyps, also known as juvenile polyps, are benign hamartomas that constitute the most frequent type of colorectal polyp in children, typically presenting before the age of ten with painless rectal bleeding [2]. Histologically, they are defined by a distinctive architecture of an edematous lamina propria with significant inflammatory infiltrate and prominent, cystically dilated, mucus-filled glands [2]. While common in pediatrics, their diagnosis in the adult population is a rare event, often occurring as an incidental and solitary finding [3].

The clinical context dramatically changes when such a polyp is discovered in a patient with long-standing ulcerative colitis (UC) [4]. UC is a chronic inflammatory

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bowel disease (IBD) characterized by relapsing and remitting inflammation of the colonic mucosa [5]. It is well-established that the duration and extent of this chronic inflammation are major risk factors for the development of colorectal cancer (CRC) [6]. This elevated risk necessitates structured surveillance colonoscopy programs aimed at detecting precancerous dysplastic lesions [7]. Within this high-risk population, any detected polypoid lesion is viewed with a high degree of suspicion for being a dysplasia-associated lesion or mass (DALM) or a sporadic adenoma, both of which carry malignant potential [8].

The discovery of a true retention polyp in this setting presents a significant diagnostic conundrum. It represents a non-neoplastic lesion mimicking potentially malignant growths in a patient predisposed to cancer [9]. Therefore, its accurate identification is not merely an academic curiosity but a clinical imperative to avoid misdiagnosis, ensure appropriate management, and provide an accurate prognosis. This report details the exceptionally rare case of a solitary rectal retention polyp identified and resected during a routine surveillance colonoscopy in a 42-year-old male with quiescent ulcerative colitis, followed by a discussion of the diagnostic challenges and a review of the relevant literature.

Case Presentation

A 42-year-old male with a 9-year history of left-sided ulcerative colitis (extending up to the splenic flexure) presented for a scheduled surveillance colonoscopy. His disease was in clinical remission, and he had been successfully maintained on oral mesalamine therapy (2.4 g/day). The patient was completely asymptomatic, denying any rectal bleeding, abdominal pain, or changes in bowel habits. He had no significant family history of inflammatory bowel disease, colorectal cancer, or polyposis syndromes.

On physical examination, his vital signs were stable, and his abdomen was soft and non-tender with no palpable masses. Laboratory investigations, including a complete blood count and inflammatory markers, were within normal limits, confirming the quiescent state of the disease.

Colonoscopy was performed up to the cecum. The mucosa from the rectum to the splenic flexure showed mild erythema and a slightly blunted vascular pattern, consistent with mild disease activity in a patient currently in clinical remission (Mayo Endoscopic Score of 1). The colonic mucosa proximal to the splenic flexure was entirely normal.

In the rectum, a solitary, sessile (Paris type Is), cystic-appearing polyp was identified. The lesion measured approximately 15 mm in diameter and had a smooth, glistening surface without any erosions or ulceration (Figure 1).

Given the macroscopic appearance and the need to rule out dysplasia, an endoscopic mucosal resection

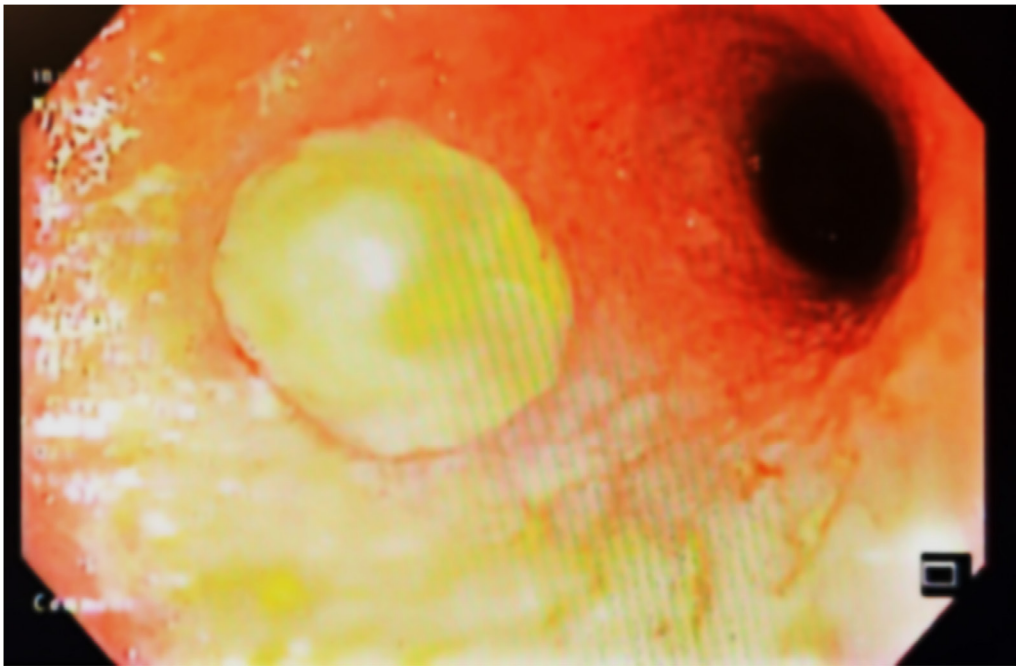

Fig. 1. Close-up endoscopic view of the rectal polyp, highlighting its translucent, cystic appearance and well-demarcated borders against the surrounding normal mucosa.

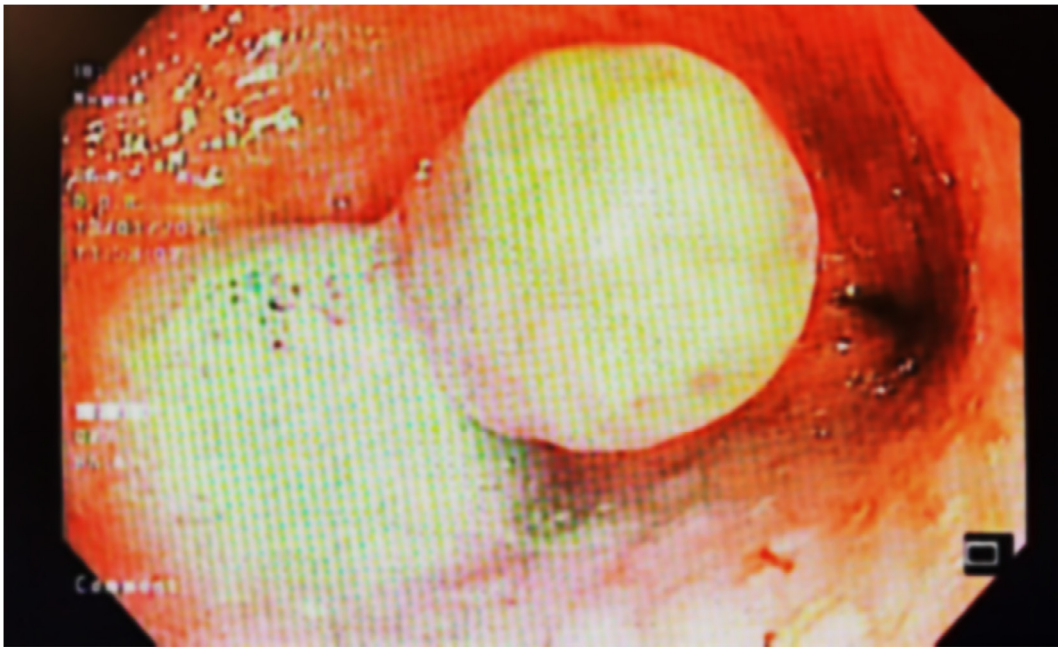

Fig. 2. Endoscopic view of the rectal lesion after submucosal injection of epinephrine and methylene blue, demonstrating successful lifting of the polyp.

(EMR) was performed for complete diagnostic and therapeutic excision. After creating a submucosal cushion by injecting a lifting solution (saline and dilute indigo carmine), the polyp was successfully resected en bloc using a snare cautery (Figure 2). The procedure was uncomplicated, with no immediate bleeding or perforation.

Histopathological examination of the resected specimen revealed a polypoid tissue with an abundant edematous lamina propria heavily infiltrated by inflammatory cells. The hallmark finding was the presence of cystically dilated glands filled with mucus and lined by cuboidal to columnar cells exhibiting reactive changes. There was no evidence of adenomatous features, dysplasia, or malignancy. These histopathological findings firmly established the diagnosis of a retention (juvenile) polyp.

The patient had an uneventful recovery and was advised to continue his mesalamine therapy and standard surveillance colonoscopy schedule.

Discussion

This case highlights the rare intersection of two distinct clinical entities: a retention polyp, typically a lesion of childhood, and ulcerative colitis, a chronic inflammatory condition of adulthood predisposing to malignancy. The incidental finding of this benign hamartoma during cancer surveillance in a UC patient is a noteworthy event that warrants a detailed discussion on its pathogenesis, differential diagnosis, and management [10].

The pathophysiology of retention (juvenile) polyps is not completely elucidated, but the prevailing theory suggests it is a reactive process secondary to inflammation. This theory posits that inflammation and mucosal injury may contribute to the obstruction of colonic crypts, mucus accumulation, and cystic dilatation of the glands, which ultimately forms the polypoid structure [11]. This blockage results in the cystic dilation of the glands and a secondary inflammatory response in the surrounding lamina propria, ultimately forming the polyp [12]. In our patient with underlying UC, even in a state of remission (Mayo Score 1), a persistent, low-grade mucosal inflammation could plausibly create the ideal microenvironment for such a process to occur. This contrasts with the pathogenesis in children, where a specific underlying inflammatory disease is usually absent. The report by Chen et al. (2020) on a similar case in a UC patient lends support to the idea that the chronic inflammatory milieu of IBD itself may be a predisposing factor for this otherwise rare adult lesion [4].

From an endoscopic perspective, the differential diagnosis of a solitary polyp in a UC patient is broad and clinically critical. The primary concern is always a dysplastic lesion (DALM or adenoma), which can

appear as a sessile, slightly raised lesion, sometimes with a villous or irregular surface [13]. The smooth, cystic, and well-demarcated appearance of the polyp in our case was suggestive of a benign process, but these features are not pathognomonic and cannot reliably exclude dysplasia. Other submucosal lesions like lipomas or neuroendocrine tumors could also be considered but are less common. Therefore, visual diagnosis alone is insufficient [14].

The management strategy hinges on the principle of "resect and inspect." Complete endoscopic removal is generally recommended for both diagnosis and therapy [15]. In this case, endoscopic mucosal resection (EMR) was an appropriate and effective approach. EMR allows for the en bloc removal of a 15 mm lesion, providing a single, intact specimen. This approach offers advantages over piecemeal resection or simple biopsy, as it allows the pathologist to meticulously examine the entire lesion architecture, assess the margins, and definitively rule out any focal areas of dysplasia that could be missed in smaller samples. The procedure's safety and efficacy make it a widely accepted approach for such polyps.

Ultimately, the definitive diagnosis rested on the histopathological findings. Histopathological examination revealed an edematous lamina propria with an inflammatory infiltrate, and cystically dilated, mucus-engorged glands, confirming the diagnosis of a retention polyp [4]. Crucially, the absence of key features of neoplasia—such as nuclear atypia, hyperchromasia, loss of polarity, and architectural complexity seen in adenomas—provided conclusive evidence of its benign nature. This histopathological certainty is what allows the patient to return to their standard UC surveillance protocol without the need for more aggressive follow-up required for dysplastic lesions.

Conclusion

This case report underscores the rare occurrence of a solitary rectal retention polyp in an adult patient undergoing surveillance for ulcerative colitis. While the primary focus during such endoscopies is the detection of dysplastic lesions, clinicians must remain aware that benign entities like retention polyps can also arise. Complete endoscopic resection, often performed via EMR for lesions of this size, followed by meticulous histopathological examination, is an established and effective management strategy. Further case reports and studies are encouraged to better understand the true incidence and potential pathophysiological links between retention polyps and chronic inflammatory bowel diseases.

Ethical Considerations

Ethics approval and consent to participate

Not applicable

Consent for publication

Written informed consent was obtained from the patient for the publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

Availability of data and materials

All data generated or analyzed during this study are included in this published article.

Funding

The authors declare that no financial support or funding was received for the research, authorship, and/or publication of this article.

Conflict of Interests

The authors have no conflict of interest to declare.

Acknowledgements

The authors would like to thank [anyone special you want to acknowledge, e.g., colleagues, institutions, funding agencies, or family] for their support and contribution to this work.

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