

Case Report

A Rare Case of Appendiceal Polyp From Screening Colonoscopy – A Case Report

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Abstract

Background: Appendiceal adenomatous polyps are rare and present diagnostic challenges. The reported incidence of these polyps during autopsy ranges from 0.004% to 0.08%. The identification of appendiceal polyps during colonoscopy is uncommon, and there is limited literature on this subject. This case highlights the importance of thorough assessment of the appendix during colonoscopy.

Case Presentation: A patient with a history of chronic constipation presented with complaints of per rectal bleeding and rectal pain. The patient had previously undergone a surveillance colonoscopy several years ago, which showed normal findings. During the current colonoscopy, a 0.5 cm x 0.5 cm polyp was identified at the appendiceal orifice.

Discussion: Appendiceal polyps are rare findings during colonoscopy, and their detection can be difficult due to the anatomical location of the appendix. The significance of these polyps lies in their potential to cause complications such as malignancy, intussusception, or chronic appendicitis. While guidelines for the follow-up of patients with appendiceal orifice polyps are limited, this case emphasizes the need for careful examination of the appendix during colonoscopy.

Conclusion: A thorough assessment of the appendix during colonoscopy is essential for detecting appendiceal polyps and preventing potential complications. Further research and clearer follow-up guidelines are needed for patients with appendiceal opening polyps.

Keywords: Appendiceal Polyp, colonoscopy, Screening colorectal, colonic polyp

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Introduction

A polyp is a term used to describe a mucosal protrusion that may originate from any mucosal layer in the body. Colonic polyps arise from the mucosal layers of the colon and can be further classified into inflammatory, hamartomatous, serrated (hyperplastic), or adenomatous polyps based on their histopathology [1].

It is well-established that the most common type of colorectal cancer originates from adenomatous polyps [2].

Adenomatous polyps can be classified into three histopathological types: tubular, tubulovillous, and villous adenomas. Another classification method for adenomas is based on their gross appearance during endoscopy, where they may be pedunculated, sessile, flat, depressed, or excavated. Most patients with adenomatous polyps exhibit no symptoms, and the

polyps are often incidentally discovered during screening procedures such as colonoscopy [2].

The occurrence of benign appendiceal polyps is rare, typically being found incidentally during autopsy or surgery [3]. The reported incidence of these polyps during autopsy ranges from 0.004% to 0.08% [4].

The identification of appendiceal polyps during colonoscopy is uncommon, and there is limited literature on this subject. Nonetheless, to accurately recognize appendiceal pathologies, the endoscopist should be attentive to abnormal features in the appendiceal orifice [5].

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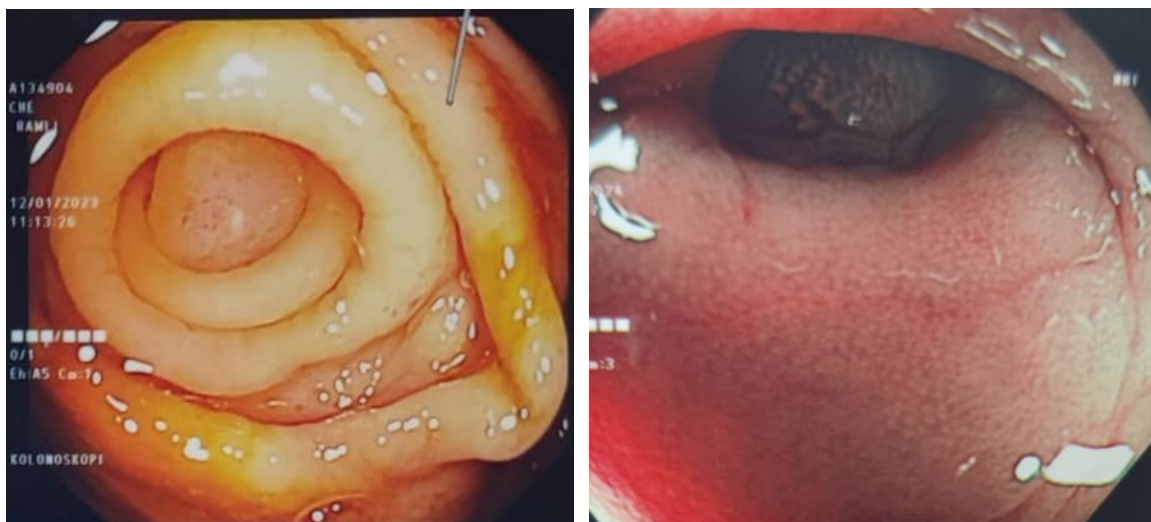
We present a case report detailing the discovery of an appendiceal orifice polyp during a colonoscopy at Hospital Universiti Sains Malaysia (USM), Malaysia. The subject of this report is a 60-year-old gentleman with a history of underlying prostate cancer, he was diag-

nosed 2 years ago on 2022, who had previously undergone radiotherapy for prostate cancer after he was diagnosed. The indication for the colonoscopy was post-radiotherapy proctitis, as the patient presented with symptoms of rectal pain and per rectal bleeding following radiotherapy.

The patient had previously undergone surveillance colonoscopy several years ago due to chronic constipation. However, during that initial colonoscopy, no abnormalities were found. It remains uncertain whether the findings were overlooked or if the polyp had not yet developed at that time.

Before the colonoscopy procedure, the patient underwent preparation involving the ingestion of oral laxatives to thoroughly cleanse the contents of the bowel.

Subsequently, the colonoscopy was conducted with the patient under sedation. The scope was advanced throughout the large bowel, reaching as far as the cecum. During this examination, a polyp measuring 0.5 cm x 0.5 cm was identified within the appendiceal lumen, as shown in Picture 1. It is a pedunculated polyp with a broad base. No additional abnormalities were observed throughout the entirety of the large bowel. No biopsy was obtained from the identified polyp, as it appeared benign and its broad base made it very difficult for polypectomy. The patient was not keen on surgical removal, so surveillance colonoscopy was recommended.



Picture 1. Picture of Appendiceal Orifices Polyp from our colonoscopy findings.

Discussion

The appendix originates embryologically from the cecum and exhibits histological similarities to colorectal tissues [6]. The similarity in embryological origin between the appendix and the cecum may account for the 4.1% incidence of synchronous appendiceal neoplasia observed in patients with colorectal cancer [7].

Regardless of their location in the gastrointestinal tract, both tubulovillous adenomas and serrated adenomas are considered precancerous polyps and require removal. Given the analogous mucosal pattern between the appendix and the colon, it is hypothesized that appendiceal adenocarcinoma may contribute to 1% of all colorectal malignancies [3].

Serrated adenomas located in the appendix are generally considered more aggressive than those found in the colon and rectum. Histologically, serrated polyps are categorized into three subgroups: hyperplastic polyps, sessile serrated adenomas, and tradi-

tional serrated adenomas. Hyperplastic polyps in the appendix are rare and exhibit morphological similarities to those found in the colon [8].

Retrospective histopathological analyses of appendectomy specimens have revealed that the predominant malignant neoplasms in the appendix are carcinoid tumors, with adenocarcinomas being the second most common type. Additionally, adenomatous polyps of the appendix are frequently documented in case reports. Generally, benign tumors of the appendix tend to be asymptomatic, affecting approximately 10% of patients [3].

Hence, the early identification of precancerous appendiceal polyps is crucial. However, these polyps are often discovered incidentally during surgical procedures, particularly in cases involving complications like appendicitis or intussusception. Approximately 10% of these polyps are fortuitously identified through laparotomy during unrelated appendiceal procedures [9].

The absence of polyp detection in poorly visualized areas can compromise the quality of screening colonoscopy. Detecting polyps in regions like the appendiceal lumen can pose challenges due to the limited accessibility with a standard endoscope. Endoscopic identification of appendiceal lesions is infrequent and typically confined to the base of the cecum and the appendiceal orifice. Nonetheless, accurate recognition of appendiceal pathologies requires the endoscopist to be vigilant for abnormal features associated with the appendiceal orifice [3].

Identifying these polyps can serve as a preventive measure against complications such as appendicitis and intussusception. Moreover, it might influence the timing of subsequent surveillance colonoscopy. Furthermore, detecting and removing such polyps can mitigate the risk of potential future occurrences of appendiceal or colorectal cancer [10].

In a case review presented by Afshin Amini in *Gastroenterology Case Reports*, three occurrences of appendiceal orifice polyps were recorded, initially escaping notice during the initial visualization of the cecum. These polyps were later identified through a careful and thorough evaluation, which included deflation of the cecum in a subsequent colonoscopy procedure [10].

As per A. Al Toma et al., their findings revealed that in three out of four patients with pre-malignant polyps, histopathological examination of the appendiceal wall after surgical resection indicated inflammatory changes. It is suggested that polyps in the appendiceal region may contribute to luminal obstruction. The persistent secretion of mucus could lead to increased intraluminal pressure and luminal distension. This sequence of events might eventually culminate in the development of chronic appendicitis, potentially serving as the origin of abdominal complaints in these patients [3].

The endoscopist should consistently consider the potential presence of an appendiceal neoplasm. Hence, it is crucial to thoroughly inspect the appendiceal region during colonoscopy. Based on our experience, the opti-

mal inspection of the appendiceal orifice occurs when it is visualized continuously for a few seconds, allowing any concealed polyps—colloquially referred to as "vanishing polyps"—to become apparent. The decision to perform polypectomy during endoscopy or to refer all such cases for resection depends on the discretion of the endoscopist [3].

Complete removal of this type of polyp presents challenges and is associated with a heightened risk of recurrence or perforation. As a result, surgery is generally the preferred approach [11].

Conclusion

Appendiceal polyps present a rare occurrence that is often overlooked during colonoscopy, particularly when performed by less experienced operators. Studies indicate instances where appendiceal polyps were initially missed during the first colonoscopy but later detected in subsequent examinations. Similar to other colorectal polyps, appendiceal polyps carry the risk of malignancy.

Therefore, a thorough assessment of the appendix area during colonoscopy is imperative to prevent complications such as malignancy, intussusception, or chronic appendicitis. The decision to remove appendiceal polyps during the colonoscopy itself depends on the surgeon's preferences and comfort level. However, removing a polyp from the appendiceal opening area is challenging and carries the risk of cecum or appendix base perforation. Consequently, surgical resection at a later stage is often preferred to reduce morbidity, and it allows for adequate resection margins if malignancy is suspected.

Lastly, the current follow-up guidelines for patients with appendiceal opening polyps lack clear recommendations or guidelines. Advocacy for incorporating specific protocols for such cases into existing guidelines is encouraged.

References

1. Emil S, Najib H. Adenoma and malignant colorectal polyp: pathological considerations and clinical applications. *EMJ Gastroenterol*. 2018;7(1):92–102.
2. Amersi F, Agustin M, Ko CY. Colorectal cancer: epidemiology, risk factors, and health services. *Clin Colon Rectal Surg*. 2005;18(3):133–40.
3. Toma A, et al. Colonoscopic visualization of benign polyps in the appendiceal region. *Gastroenterol Hepatol Open Access*. 2016;5(6). doi:10.15406/ghoa.2016.05.00164
4. Wolff M, Ahmed N. Epithelial neoplasms of the vermiform appendix (exclusive of carcinoid). I. Adenocarcinoma of the appendix. *Cancer*. 1976;37(5):2493–510.
5. Khawaja FI. Diseases of the appendix recognized during colonoscopy. *Saudi J Gastroenterol*. 2002;8(2):43–52.
6. Lee FD. Pathology of the appendix. In: Williams RA, Myers P, editors. *Chapman & Hall, London*; 1994. *J Pathol*. 1994;173(3):297.
7. Khan MN, Moran BJ. Four percent of patients undergoing colorectal cancer surgery may have synchronous appendiceal neoplasia. *Dis Colon Rectum*. 2007;50(11):1856–9.
8. Tirman B, Tarım İA, Kamalı Polat A. Appendiceal hyperplastic polyp: case report. *Turk J Colorectal Dis*.

- 2018;155–7. doi:10.4274/tjcd.59320
9. Aranha GV, Reyes CV. Primary epithelial tumors of the appendix and a reappraisal of the appendiceal "mucocele." *Dis Colon Rectum*. 1979;22(7):472–6. doi:10.1007/BF02586933.
 10. Amini A, Koury E, Vaezi Z, Talebian A, Chahla E. "Obscure" appendiceal orifice polyps can be challenging to identify by colonoscopy. *Case Rep Gastroenterol*. 2020;14(1):15–26. doi:10.1159/000505482
 11. Freeman HJ, Webber DL, Meneghetti AT. An appendiceal neoplastic lesion: case report and implications for colonoscopic screening and surveillance. *Can J Gastroenterol*. 2009;23(5):.