Case report

Endoscopically unobservable appendiceal adenoma treated using laparoscopically assisted surgery

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ABSTRACT

Introduction: Primary benign adenomas of the appendix occur rarely. According to appendectomy and autopsy reports, benign adenomas of the appendix are sporadically reported, accounting for ~0.02–0.08% cases.

Presentation of case: We report the case of a 58-year-old woman with a segmental polyp protruding into the appendiceal orifice. The polyp was spotted during lower gastrointestinal endoscopy; however, treatment was postponed at the patient's request. During a confirmatory lower gastrointestinal endoscopy for treatment, the polyp was no longer found protruding from the appendiceal orifice and had disappeared. An appendicectomy was performed for diagnostic and therapeutic purposes. Pathological examination showed a low-degree atypical tubular adenoma with no malignant findings.

Discussion: Despite the risk of perforation, surgical resection remains the gold standard for treating appendiceal adenoma. Resection can be performed endoscopically if the stem and base of the adenoma can be identified. In the present case, laparoscopy was a good indication from the safety standpoint, and it was radically curative. Furthermore, upon performing an appendectomy, the patient was informed of the risks of cancer-related complications or the need for additional resection.

Conclusion: This suggestive case proves that appendiceal tumors can disappear endoscopically depending on the timing of examination and treatment.

1. Introduction

A primary benign adenoma of the appendix is exceptionally uncommon, and few reports have described the capacity for preoperative diagnosis. Primary appendiceal tumors are rare, accounting for 0.9% of all appendiceal resections [1]. Of these, 0.49% was carcinoid tumors, ~0.25–0.37% were mucinous neoplasms, and ~0.02–0.08% were adenocarcinomas [2]. Benign adenomas of the appendix are sporadically reported, making up ~0.02–0.08% cases, according to appendectomy and autopsy reports [3,4]. We present a case of atypical tubular adenoma in a 58-year-old woman. The case has been reported per the SCARE reporting checklist [5].

2. Presentation of case

A 58-year-old woman (height: 160.8 cm, weight: 53.9 kg) was diagnosed with appendiceal adenoma via preoperative colonoscopy. However, during endoscopic treatment, the tumor was unobservable. The patient had a history of uterine fibroids and atrial fibrillation and visited her doctor for a lobular lesion found on her appendix during a routine colonoscopy.

The bifoliate lesion was found at the entrance to the appendix (Fig. 1a). Biopsy revealed a low-degree, Group III atypical tubular adenoma. Upon pulling the tumor with biopsy forceps, its base was found anchored to the appendix (Fig. 1b). However, there were no abnormal findings in the appendix. After formally being diagnosed with an appendiceal entrance adenoma, she was referred to our hospital for a second opinion.

Due to personal reasons, the patient scheduled an appointment at our hospital eight months after the initial colonoscopy. Our department performed a colonoscopy on the scheduled date but did not find an appendiceal mass or abnormalities in the orifice of the appendix (Fig. 2a). An abdominal computed tomography scan showed mild wall thickening at the roof of the appendix (Fig. 2b). A barium enema revealed lobular deficiency at the opening of the proximal appendix (Fig. 2c). Based on these results and those of her previous investigations, a laparoscopically assisted appendectomy was considered the best course of treatment.

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We placed the camera, grasping forceps, and electrocautery forceps through one porthole in the umbilicus. Subsequently, we mobilized the appendiceal mesentery. The appendix was extracorporeally extracted from the umbilical porthole and dissected with an automatic suture at the wall in contact with the tumor’s root (Fig. 3a). We followed this protocol to avoid contact with the atypical cells at the resection margin. The duration of the operation was 65 min, and the total blood loss was 7 ml. The excised subpedunculated tumor was at the appendicular root and measured 15 mm (Fig. 3b).

On histopathological examination, we diagnosed the patient with a low-degree atypical tubular adenoma with no malignant findings (e.g., high atypia or fission images). The excision margins were negative for malignancy. The patient’s postoperative course was uneventful, and she was discharged on the seventh postoperative day.

3. Discussion

Upon diagnosing an appendiceal adenoma, treatment is crucial to avoid possible complications, such as cancer migration, appendicitis, or hyperemesis. Despite the risk of perforation, surgical resection remains the gold standard appendiceal adenoma; resection is possible endoscopically if the stem and base of the adenoma can be identified. Appendectomies are sufficient in cases where the tumor is confined to the appendix and allows for complete resection.

In our patient, laparoscopic surgery was a good indication from a safety standpoint and was radically curative. Radical surgery with biphasic lymph node dissection is required if postoperative histopathological investigations after an appendectomy reveal cancer. This is similar to the treatment strategy used for colorectal cancer. Therefore, a
thorough postoperative histopathological examination should always be performed. Furthermore, upon performing an appendectomy, the patient should be informed of the risks of cancer-related complications or a need for additional resection.

4. Conclusion

This suggestive case proves that appendiceal tumors can disappear endoscopically depending on the timing of examination and treatment.

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Guarantor

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Ethics statement

The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Informed consent

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

CRediT authorship contribution statement

TK: Conceptualization, Methodology, Software, Data curation, Writing- Original draft preparation, Visualization, Investigation. GT: Supervision. YA, KY, YK: Writing- Reviewing and Editing.

Declaration of competing interest

The authors have no conflicts of interest to declare.

References

[1] S.J. Conner, G.B. Hanna, F.A. Frizelle, Appendiceal tumors: retrospective clinicopathologic analysis of appendiceal tumors from 7970 appendectomies, Dis. Colon Rectum 41 (1998) 75–80.
[2] H. Shinya, W.I. Wolff, Morphology, anatomic distribution and cancer potential of colonic polyps, Ann. Surg. 190 (1979) 679–683.
[3] D.C. Collins, 71000 human appendix specimens. A final report summarizing forty years’ study, Am. J. Proctol. 14 (1963) 265–281.
[4] K.J. Schmutzer, M. Bayar, A.E. Zak, J.F. Regan, J.B. Poletti, Tumors of the appendix, Dis. Colon Rectum 18 (1975) 324–331.
[5] R.A. Agha, M.R. Borrelli, R. Farwana, K. Koshy, A.J. Fowler, D.P. Orgill, et al., The SCARE 2018 statement: updating consensus Surgical Case RePort (SCARE) guidelines, Int. J. Surg. 60 (2018) 132–136.