

# To Remove or Not to Remove? A Case of Appendiceal Inversion and Its Diagnostic Challenges

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#### Introduction

- Appendiceal inversion occurs when the appendix is pulled the lumen of the cecum and can be an uncommon incidental finding on colonoscopy.
- When found, they may present as a diagnostic challenge to the endoscopist, as they may be mistaken as a colon polyp or even a neoplasm due to its appearance.

## Initial Case Presentation

Patient	• 75 year old woman with history of hypertension, hysterectomy, and reported hemorrhoids
Presentation	<ul> <li>Presented to gastroenterology clinic after having a positive</li> <li>Cologuard test</li> <li>No known family history of colorectal cancer</li> </ul>
Initial Workup	<ul> <li>Initial colonoscopy performed showed a "large, polypoid lesion protruding from the appendiceal orifice"</li> <li>Forceps biopsies of the lesion revealed normal mucosa</li> </ul>
Next Steps	<ul> <li>Referred to interventional endoscopy for possible removal of the lesion</li> <li>Underwent repeat colonoscopy for re-evaluation of the lesion</li> </ul>

## Endoscopic Findings



Figure 1. Endoscopic findings of an appendiceal inversion. Images A, B, C under white light endoscopy reveal no ulcerations or masses. Image D under narrow-band imaging reveals normal microvasculature and microsurface patterns along the lesion.

# Subsequent Workup

- CT abdomen/pelvis was performed after colonoscopy with no evidence of bowel obstruction or mass and a normal appearing appendix
- Repeat biopsies of the lesion again returned as normal mucosa

#### Discussion

- At present, there are **no definitive guidelines** on the workup of suspected appendiceal inversions.
- Appendiceal inversions may occur due to benign causes
  - Iatrogenic after open appendectomy
  - Congenital
- However, they may also be associated with adenomas and neoplasms
- Removal of these lesions has been associated with peritonitis and significant bleeding
- Suggested steps in the diagnostic workup include:
  - Thorough surgical history
  - Endoscopic evaluation
    - Assess for surrounding inflammation
    - Narrow band imaging
    - Biopsy of the lesion  $\rightarrow$  perform with caution
  - Diagnostic imaging
    - CT imaging
      - Prior case reports have reported identification of mucinous neoplasms on CT following colonoscopy
      - In this patient, CT imaging did not reveal any underlying malignancy

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