

Nematode as a Cause of Appendicular–Cutaneous Fistula

Jiangtao Yu

Weihai Municipal Hospital, Cheeloo college of medicine, Shandong university

Qingfei Sun

Weihai Traditional Chinese Medicine Hospital

Ying Shan

weihai traditional chinese medicine hospital

Xiangyun Zheng

weihai municipal hospital, cheeloo college of medicine, shandong university

Huanhu Zhang (✉ whslyzxy@163.com)

Weihai Municipal Hospital

Case report

Keywords: nematode, appendicitis, appendicular–cutaneous fistula

Posted Date: November 22nd, 2021

DOI: <https://doi.org/10.21203/rs.3.rs-1029212/v1>

License:   This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

Abstract

Background

Cutaneous fistula may develop spontaneously as a complication of an perforating appendicitis. However, intestinal fistula caused by parasites is a rare report.

Case presentation

In the operation, we found that expanded appendix was perforated from its distal part and was fistulized to the right lateral abdominal wall. The complications of postoperative was intestinal fistula. Colonoscopy was performed revealing some nematode around the appendiceal orifice. The development of fistula after bowel resection and anastomosis can be devastating. Immediate drainage and establishment of enteral nutrition can lead to spontaneous healing of fistula.

Conclusions

Testing for nematode infection in a patient with suspected appendicitis is not routine, it still stands as a challenge in clinical practice. In view of this situation, killing parasites is necessary, otherwise it is difficult to cure.

Main Text

The patient was a 75-year-old man whose chief complaint was right lower quadrant intermittent dull pain for one year, drainage of purulent secretion through a orificium fistula in right regio abdominalis lateralis for one month before admission. His medical history was unremarkable. Abdominal magnetic resonance scan was performed and revealed abnormal signal from the iliac fossa to the right regio abdominalis lateralis in Figure 1A. Therefore, a presumptive diagnosis of appendicitis with cutaneous fistula was made. During exploration, expanded appendix was seen, which was perforated from its distal part and was fistulized to regio abdominalis lateralis. Open appendectomy was performed and the stump was buried routinely. Appendicular-cutaneous fistula was resected and then the area was left open for secondary healing. A stump drain was put in the appendectomy field. The histological examination of the removed appendix and fistula showed chronic inflammation. There were no nematodes identified at that stage. On the third postoperative day, a small amount of fecal material and gas was drawn out through the drainage with no abdominal pain and fever. A emergency colonoscopy was performed revealing some nematode around the appendiceal orifice shown in Figure 1B surprisingly. Due to the local action of nematodes on the stump, the closure of appendix stump failed, partial resection of the intestinal and the insertion of mebendazole into lumen were performed. The patient was discharged with a course of anti-helminthics and recovered uneventfully. Appendectomy is amongst the most common general surgical procedures performed. One critical part of this procedure is effective closure of the appendix stump to prevent catastrophic intra-abdominal complications from a fecal leak into the abdominal cavity. The formation of a post-appendectomy fistula is rare but devastating. Major etiological factors include

leakage from the appendiceal stump, neoplasm of the appendix or cecum, infection, inflammatory bowel disease, and distal obstruction. The management of enterocutaneous fistula involves enteral nutrition, drainage, antibiotic coverage, as well as surgical excision and segmental resection of the involved bowel. Prolonged intrabdominal infection can lead to enterocutaneous fistula, chronic bowel obstruction, sepsis, and even death [1]. Some refractory fistulas may need surgical repairment [2]. Cutaneous fistula may develop spontaneously as a complication of an perforating appendicitis [3]. However, intestinal fistula caused by parasites is a rare report. The development of fistula after bowel resection and anastomosis can be devastating. Immediate drainage and establishment of enteral nutrition can lead to spontaneous healing of fistula [4]. Testing for nematode infection in a patient with suspected appendicitis is not routine, it still stands as a challenge in clinical practice. In view of this situation, killing parasites is necessary, otherwise it is difficult to cure.

Declarations

Ethics approval and consent to participate

The data in terms of ethics approval and patient informed consent are in compliance with the relevant provisions of the Medical Ethics Committee.

Consent for publication

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

Availability of data and materials

Data and materials are truly available.

Funding

No funding.

Authors' contributions

Conception or design of the work: Jiangtao Yu, Huanhu Zhang;

Writing- Original draft preparation: Jiangtao Yu;

Data curation: Qingfei Sun, Ying Shan, Xiangyun Zheng;

Writing- Reviewing and Editing: Xiangyun Zheng, Huanhu Zhang.

Conflicts of interest

The authors declare no conflict of interest.

References

1. Montravers P, Dupont H, Leone M, Constantin JM, Mertes PM, Laterre PF, et al. Guidelines for management of intra-abdominal infections. *Anaesth Crit Care Pain Med.* 2015;34(2):117-30.
2. Quinn M, Falconer S, McKee RF. Management of Enterocutaneous Fistula: Outcomes in 276 Patients. *World J Surg.* 2017;41(10):2502-11.
3. Muthukumarassamy R, Shankar Raman R, Chandra SS, Jagdish S. Appendico-cutaneous fistula. *Indian Journal of Surgery.* 2005;67(6):323-4.
4. Ashkenazi I, Turégano-Fuentes F, Olsha O, Alfici R. Treatment Options in Gastrointestinal Cutaneous Fistulas. *Surg J (N Y).* 2017;3(1):e25-25e31.

Figures

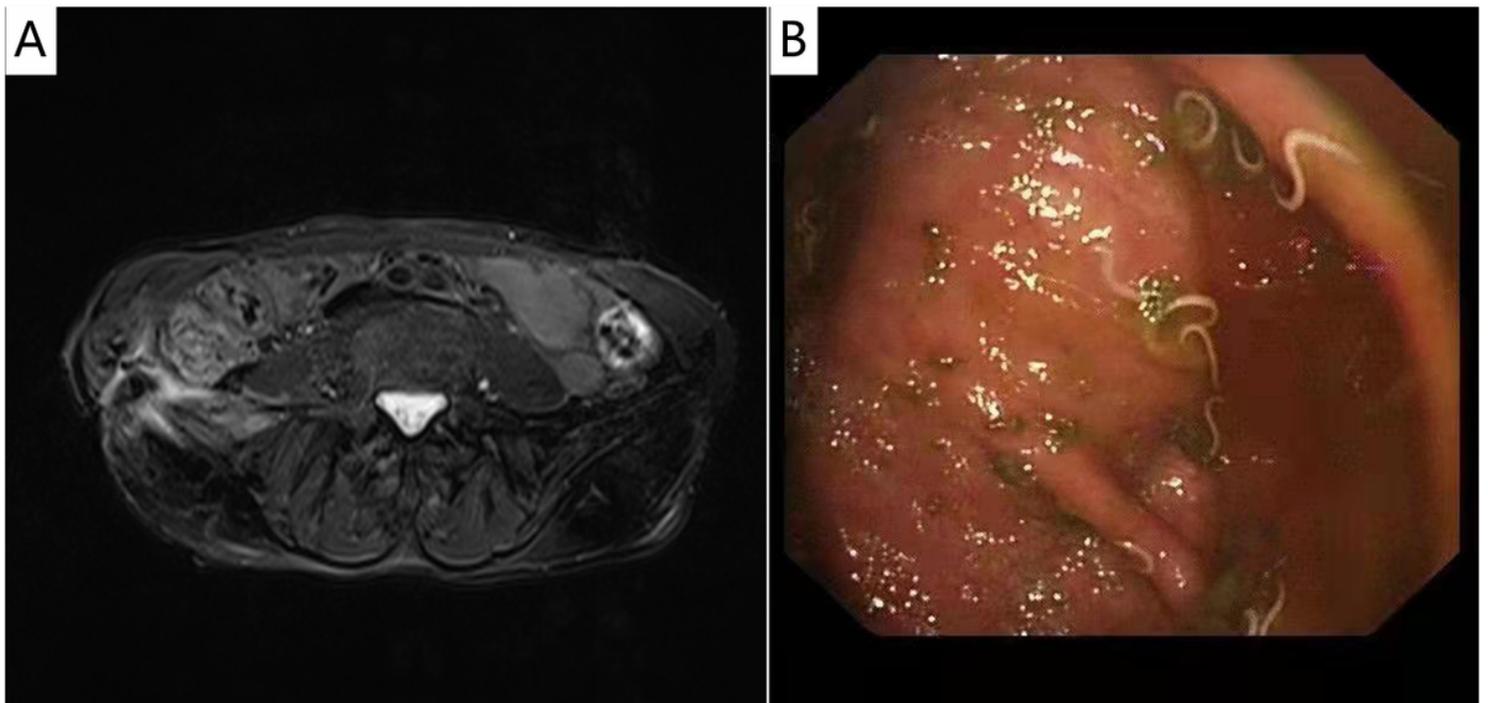


Figure 1

(A) abdominal magnetic resonance scan showed the abnormal signal from the iliac fossa to the right regio abdominalis lateralis. (B) the emergency colonoscopy revealed some nematode around the appendiceal orifice.