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General Surgery

A RARE CASE REPORT ABDOMINAL TUBERCULOSIS PRESENTED WITH APPENDICULAR PERFORATION IN PATIENTS ON PPIs

Dr. Yalla Sai Vamsi Krishna Reddy*	Post graduate in general surgery, Narayana medical college and hospital,Nellore. *Corresponding Author
Dr. Nimmagadda Venkata Harish	Assistant professor of general surgery, Narayana medical college and hospital,Nellore
Dr Neeli Sai Krishna	Post graduate in general surgery, Narayana medical college and hospital , Nellore .
Dr.T.Latha Sri	Post graduate in general surgery, Narayana medical college and hospital, Nellore

ABSTRACT Gastrointestinal tuberculosis (TB) accounts for 3% of extrapulmonary TB. Ileocecal region pf gastro intestinal tract being involved is about 75%. Primary Tuberculosis of appendix is a rare type of abdominal TB and is seen in only 0.1%–0.3% of cases. Diagnosis in most instances made after histopathologic examination of the appendectomy specimen. In development countries like India where the prevalence of TB is high patients on PPIs for longer periods have a chance of occurrence or activation of TB.17 Here we present a case of abdominal TB presented with perforated tubercular appendix , who is a known case of GERD on PPI s regularly.

KEYWORDS : tuberculous appendicitis, abdominal tuberculosis, perforated appendix, histopathology, nonspecific abdominal pain

INTRODUCTION

Tuberculosis continues to be a significant and more prevalent communicable disease in developing countries like India and thus even rare presentation, manifestation and risk factors of this disease to be addressed. Gastrointestinal tuberculosis (TB) accounts for 3% of extrapulmonary TB. 17 Here we present a rare case of abdominal TB presented with perforated tubercular appendix , who is a known case of GERD on PPI s regularly.

CASE REPORT

A 31 year-old male patient presented to narayana medical college and Hospital with complaints of severe abdominal cramp, periumbilical pain which shifted to the right lower quadrant of the abdomen for 3 days duration, well as high-grade fever. He had no past history or family history of TB. Patient was on PPI s for the past 2 years for complaints of GERD.He had no cough, sweating, and weight loss, which suggested the evidence of pulmonary TB. Similarly, the patient had no history of subacute intestinal obstruction in the past, had no diarrhea and constipation, and had no urgency or pain during urination.

Local examination of the abdomen revealed that there was direct tenderness below the umbilicus ,right lumbar region and right iliac fossa, and rebound tenderness over the right lower quadrant of the abdomen. . X-ray showed pneumoperitoneum, bilateral lung fields were normal with no features of pulmonary TB.USG abdomen showed features of peritonitis secondary to perforation of appendix. Laboratory studies on blood revealed hemoglobin to be 14.7g/dL; white blood cell count 16,100/µL, neutrophil 83%, and HIV serology result negative.

With the clinical diagnosis of pelvic peritonitis secondary to perforated acute appendicitis, the patient was taken up for surgery. The peritoneal cavity was opened through the lower midline incision and 30 mL of toxic fluid in the right lower abdomen and perforated appendix at the midappendix at ante mesoappendiceal border was found. Then, the toxic fluid was drained and appendectomy done and abdominal lavage were performed, and the abdominal wall was closed in layers.

The resected appendix specimen was sent for histopathology, and the histological picture revealed caseous necrosis, epithelioid granulomas with langhan type gaint cells in the body of the appendix, which is diagnostic for extrapulmonary TB (Figure 1). Based on these findings, the final diagnosis of perforated tuberculous appendicitis was made and then started on anti-TB treatment on the 7th postoperative day and continued it for 6 months. During the follow-up visits, the abdominal signs and symptoms were resolved and the patient had marked clinical recovery to date.

Figure 1: Multiple tubercles on the body of the appendix and mesentery (grey arrow).

Figure 2: HPE showing langhan gaint cells and caseous necrosis in the body of appendix

Figure1

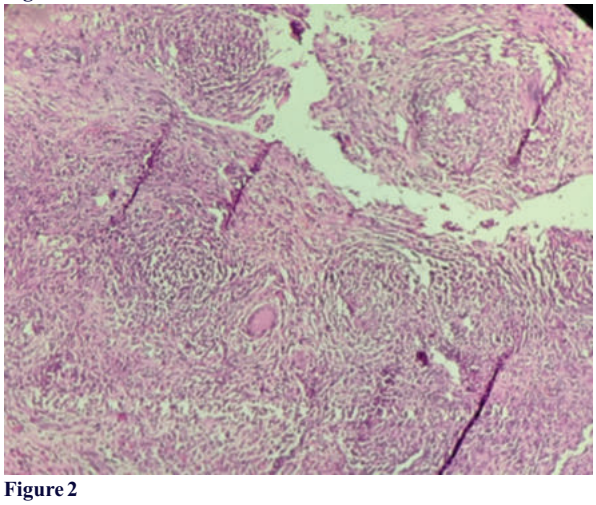

Figure 2

DISCUSSION

Tuberculosis (TB), one of the oldest diseases known to affect humans, is a major cause of death in low- and middle-income countries including india.1,2 This disease commonly affects the lungs, but it can involve any organ including the abdominal structures.1 Among them, the appendix is a rare site of TB and is seen in only 0.1%–0.3% of gastrointestinal TB cases.3Gastrointestinal TB accounts about 3% of extrapulmonary TB.5 Although any portion of the gastrointestinal tract may be affected by TB, the terminal ileum and the cecum are the most common sites involved in TB.1 The exact mechanism of tuberculous appendicitis remains unclear. However, the appendix can be involved rarely, but in various ways like via hematogenous route, infected intestinal contents, or through an extension from neighboring ileocecal or genital TB.6

Several authors reported the mode of tuberculous appendicitis infection to be ingestion of contaminated foods and unhealthy sanitary habits.3,6 Rabbani et al7 reported that tuberculous appendicitis was usually secondary to TB elsewhere in the abdomen.7 Sinha and Sarin8 also reported that appendicular TB was associated with secondary tuberculous salpingitis. The present case report represented the rare case of perforated tuberculous appendicitis with abdominal TB in patient on PPI s.

Regarding the clinical pictures of perforated tuberculous appendicitis, none of the reported cases had a preoperative diagnosis of tuberculous appendicitis.7 Some authors, including Maharjan,10 and Morrison et al9 reported that patients with tuberculous appendicitis had symptoms consistent with acute appendicitis.11,12 Majority of the cases presented with recurrent episodes of pain at the right iliac fossa, vomiting,6 vague abdominal pain, occasional history of diarrhea, and a mass in the right iliac fossa.3,13 Harris et al14 also reported periumbilical pain which settled in the right iliac fossa. Some authors also reported that the symptoms of the disease were indistinguishable from pyogenic appendicitis.3 The current case also had complained of severe abdominal cramp, peri-umbilical pain, as well as high-grade fever.

Since patients present with unidentifiable clinical features, preoperative diagnosis of appendicular TB is difficult.11,15 The diagnosis is usually made after the histo-pathologic examination of the appendectomy specimen.7,11 In many reports, appendicular TB was found accidentally during the histopathologic examination of the resected appendix.10,11,16 Similarly, in the current case report of perforated tuberculous appendicitis, the disease was found out accidentally during the histopathologic examination of the resected appendix. Only 14% of GI tuberculosis shows features of pulmonary TB on chest x-rays. .In India where the prevalence of TB is high case of abdominal TB presenting with vague symptoms and carriers with complaints of GERD need to be screened for TB before starting of PPIs .17

CONCLUSION

Upon admission, the patient was not suspected to have perforated tuberculous appendicitis but rather pelvic peritonitis secondary to perforated acute appendicitis. Perforated tuberculous appendicitis diagnosis was confirmed only after histopathologic examination of the resected appendix. Hence, TB, a highly prevalent disease in low- and middle-income countries, should always be considered in patients with nonspecific abdominal clinical sign and symptoms. prescription of acid-suppressive agent seems to associate the TB infection/activation. Under the consideration of initial TB infection/activation mimic atypical reflux esophagitis, in the society where Mycobacterium tuberculosis was prevalent, evaluation of pulmonary TB was warranted before prescription of acid-suppressive agent.17 It is also suggested that all specimen from perforated appendicitis be subjected to histopathologic examination.

Ethical Consent

Written informed consent was obtained from the patient for publication of this case report and any accompanying images.

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We would like to thank our study subject for his consent of publication of this case report and any accompanying images.
footnotes

Disclosure

The authors report no conflicts of interest in this work.

REFERENCES

1. Jameson JL, Kasper D, Hauser S, Longo D, Fauci A, Loscalzo J. Harrison Principles of Internal Medicine. New York: McGraw-Hill; 2008. Chapter 158. [Google Scholar]
2. Tessema B, Muche A, Bekele A, Reissig D, Emmrich F, Sack U. Treatment outcome of tuberculosis patients at Gondar University Teaching Hospital, Northwest Ethiopia. A five-year retrospective study. BMC Public Health. 2009;9:371. [PMC free article] [PubMed] [Google Scholar]
3. Nuwal P, Dixit R, Jain S, Porwa V. Isolated appendicular tuberculosis – a case report. Ind J Tub. 2000;47:241–242. [Google Scholar]
4. Dogru T, Sonmez A, Tasci I, Yagci G, Mas MR. Perforated tuberculous appendicitis and peritoneal tuberculosis. East Mediterr Health J. 2008;14(3):742–744. [PubMed] [Google Scholar]
5. Wani I, Wani RA, Malik AA, et al. Abdominal tuberculosis. OA Case Rep. 2014;3(5):45. [Google Scholar]
6. Chowdhury FR, Amin R, Khan KH, Alam B, Ahasan H. Isolated appendicular tuberculosis (TB) presented as peritonitis. Nepal Med Coll J. 2010;12(1):51–52. [PubMed] [Google Scholar]
7. Rabbani K, Narjis Y, Difaa A, Louzi A, Benelkhaiat R, Finech B. Tuberculous appendicitis. Saudi J Gastroenterol. 2010;17(4):287–289. [PMC free article] [PubMed] [Google Scholar]
8. Sinha S, Sarin YK. Tuberculous appendicitis. Indian J Pediatr. 2005;72:712. [PubMed] [Google Scholar]
9. Morrison H, Mixter CG, Schlesinger MJ, Ober WB. Tuberculosis localized in the vermiform appendix. N Engl J Med. 2016;246(9):329–343. [PubMed] [Google Scholar]
10. Maharjan S. An uncommon case of chronic tubercular appendicitis. Case Rep Pathol. 2015;2015:1–4. [PMC free article] [PubMed] [Google Scholar]
11. Gupta S, Kaushik R, Kaur A, Attri AK. Tubercular appendicitis – a case report. World J Emerg Surg. 2006;1:22. [PMC free article] [PubMed] [Google Scholar]
12. Chiș BA, Dudric V, Fodor D. Tuberculous appendicitis. A case report. Med Ultrason. 2017;19(3):333–335. [PubMed] [Google Scholar]
13. Dimakopoulos K, Saltas D, Penopoulos V, et al. Gastrointestinal tuberculosis mimicking Crohn's disease. Case report and review of the literature. Ann Gastroenterol. 2005;18(1):84–87. [Google Scholar]
14. Harris SH, Ansari MM, Gupta AR, Afroz N. Isolated appendicular tuberculosis : a rare cause of acute appendicitis. J Exp Integr Med. 2015;5(2):114–116. [Google Scholar]
15. Agarwal PD, Sharma D, Agarwal A, et al. Tuberculous appendicitis in India. Trop Doct. 2004;34(1):36–38. [PubMed] [Google Scholar]
16. Bobrow ML, Friedman S. Tuberculosis appendicitis. Am J Surg. 1956;91(3):389–393. [PubMed] [Google Scholar]
17. Hsu et al.: Acid suppressive agents and risk of Mycobacterium Tuberculosis: case–control study. BMC ssGastroenterology 2014 14:91. [PubMed].