Trichophagia as a cause of acute appendicitis in a patient with bipolar disorder

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ABSTRACT

Acute appendicitis is one of the most common abdominal surgical emergencies worldwide. Clinical diagnosis is possible in most of the cases although imaging modalities may become necessary if the diagnosis is uncertain. Appendectomy, preferably the laparoscopic approach, still remains the gold standard treatment to date. The pathophysiology usually includes luminal obstruction by an appendicolith or lymphoid hyperplasia and rarely parasitic infections. In this report, we present an extremely rare case of a patient with diagnosis of bipolar disorder and a history of trichophagia resulting in trichobezoar formation within the appendiceal lumen leading to acute appendicitis.

Keywords: Acute appendicitis; bipolar disorder; trichophagia.

INTRODUCTION

Acute appendicitis is a common general surgical emergency worldwide that requires prompt and an accurate diagnosis.[1] It can often be reliably diagnosed clinically; however, imaging modalities are often necessary to reach a conclusion. The exact cause of acute appendicitis is often multifactorial and most commonly results due to luminal obstruction, although dietary and familial factors have also been suggested previously.[2–4] Trichophagia is the ingestion of hair that is mostly associated with trichotillomania.[5] This compulsive behavior may lead to a trichobezoar formation, indicating a serious surgical condition. In this report, we present a rare case with a history of bipolar disorder and trichophagia leading to luminal obstruction of vermiform appendix and resulting in acute appendicitis.

CASE REPORT

A 23-year-old male patient presented to the emergency department with abdominal pain, anorexia, and nausea of 1 day in duration. The pain was initially located in the periumbilical region that has shifted to the right lower quadrant. The medical history includes bipolar disorder and migraine headaches. The patient takes maprotilin, trifluoperazin, lithium, and olanzapin for medication. Physical examination revealed tenderness on deep palpation of the right lower quadrant and rebound. The obturator and psoas signs were positive. Physical examination was normal. The laboratory parameters were normal except for leukocytosis (white cell count 10,600 μL) and an elevated C-reactive protein value of 76.9 mg/L. The abdominal ultrasonography and computerized tomography were taken and the findings were consistent with acute appendicitis (Fig. 1). Laparoscopic appendectomy was performed and the pathologic specimen was confirmed to be acute appendicitis with local inflammatory findings along with hair follicles within the appendix (Figs. 2 and 3). The patient has given consent for this case report to be published.

DISCUSSION

Acute appendicitis is a common reason for acute abdominal surgery worldwide and prompt diagnosis is essential to minimize morbidity. Usually, the cause of acute appendicitis is due...
The lumen of vermiform appendix leads to suppurative inflammation and sometimes perforation.[7] This may then lead to localized or generalized peritonitis and an appendiceal abscess. The diagnosis is often established clinically although imaging modalities such as ultrasonography and computerized tomography may be necessary.[8] Appendectomy, preferably the laparoscopic approach, is currently the gold standard treatment of choice.[9,10]

Trichophagia is a psychiatric disorder of repetitive, compulsive behavior of ingesting, and swallowing hair that may lead to trichobezoar formation within the gastrointestinal tract. It is often seen together with trichotillomania and causes a great danger to a patient’s health due to the risk of intestinal obstruction. Trichophagia is usually associated with anxiety, depressive disorders, obsessive-compulsive disorder, anorexia nervosa, and trichotillomania.[11] Rapunzel syndrome is a common result of this disorder which is due to a trichobezoar formation within the stomach extending up to the small bowel.[12] Rarely, as seen in this case, trichobezoar formation may occur in the distal intestine and may cause appendiceal obstruction, which can cause acute appendicitis.

Conclusion

Trichobezoar formation within the gastrointestinal system has been extensively reported previously in the literature but only a few cases of trichobezoar formation leading to appendicitis have been previously published.[13–15] Patients often remain asymptomatic in the early stages and symptoms of gastrointestinal obstruction manifest as the trichobezoar builds up within the gastrointestinal tract.[11] This condition may become a surgical emergency since it can lead to an intestinal obstruction causing acute abdomen. Therefore, trichobezoar formation should be in the differential diagnosis in any patient presenting with signs of acute abdomen with a psychiatric disorder of trichotillomania and trichophagia.

Informed Consent: Written informed consent was obtained from the patient for the publication of the case report and the accompanying images.

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REFERENCES

1. Bhangu A, Søreide K, Di Saverio S, Assarsson JH, Drake FT. Acute appendicitis: Modern understanding of pathogenesis, diagnosis, and management. Lancet 2015;386:1278–87. [CrossRef]
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2. Giudici F, Scaringi S, Zambonin D, Voglino C, Messerini L, Ficari F, et al. Poor pathogenetic role of luminal obstruction in the development of appendicitis: A case report. Medicine (Baltimore) 2018;97:e0381. [CrossRef]

3. Humes DJ, Simpson J. Acute appendicitis. BMJ 2006;333:530–4. [CrossRef]

4. Alder AC, Fomby TB, Woodward WA, Haley RW, Sarosi G, Livingston EH. Association of viral infection and appendicitis. Arch Surg 2010;145:63–71. [CrossRef]

5. Cisoń H, Kusi A, Popowicz E, Szyca M, Reich A. Trichotillomania and trichophagia: Modern diagnostic and therapeutic methods. Dermatol Ther (Heidelb) 2018;8:389–98. [CrossRef]

6. Jones MW, Lopez RA, Deppen JG. Appendicitis. In: StatPearls. Treasure Island, FL: StatPearls Publishing; 2021.

7. Stringer MD. Acute appendicitis. J Paediatr Child Health 2017;53:1071–6. [CrossRef]

8. Parks NA, Schroeppeil TJ. Update on imaging for acute appendicitis. Surg Clin North Am 2011;91:141–54. [CrossRef]

9. Fitzmaurice GJ, Mc-Williams B, Hurreiz H, Epanomeritakis E. Antibiotics versus appendectomy in the management of acute appendicitis: A review of the current evidence. Can J Surg 2011;54:307–14. [CrossRef]

10. Kumar S, Jalan A, Patowary BN, Shrestha S. Laparoscopic appendectomy versus open appendectomy for acute appendicitis: A prospective comparative study. Kathmandu Univ Med J 2016;14:244–8.

11. Jain A, Agrawal A, Tripathi AK, Bansod RK, Jain G, Yadav KS. Trichobezoar without a clear manifestation of trichotillomania. J Family Med Prim Care 2020;9:2566–8. [CrossRef]

12. Naik S, Gupta V, Naik S, Rangole A, Chaudhary AK, Jain P, et al. Rapunzel syndrome reviewed and redefined. Dig Surg 2007;24:157–61.

13. Michael G, Qureshi E, Miah M, Husain N. An unusual form of a trichobezoar causing a peculiar case of appendicitis: A case of rapunzel syndrome. Cureus 2020;12:e7554. [CrossRef]

14. Renu KT, Chinnra RG. Isolated Rapunzel tail presenting as acute appendicitis. Indian J Pediatr 2014;81:1260. [CrossRef]

15. Dogra S, Yadav YK, Sharma U, Gupta K. Rapunzel syndrome causing appendicitis in an 8-year-old girl. Int J Trichol 2012;4:278–9. [CrossRef]