

PEDIATRIC IMAGES

An Unusual Presentation of Acute Appendicitis With Mobile Cecum Syndrome



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1. Case report

A 13-year-old boy presented to our emergency department with nausea and hypogastric pain. An initial diagnosis of enteritis was made due to the patient's relatively unremarkable medical history and physical examinations. Shortly afterward, fever and severe abdominal pain in the left upper quadrant with persistent nausea developed. Laboratory examinations showed an elevated level of C-reactive protein. There was left shift of white cells without evident leukocytosis. Because of nonspecific findings in physical examinations and relatively normal laboratory results, the diagnosis initially remained inconclusive.

After being admitted for 36 hours, the patient's fever progressed to 39°C despite partial relief of abdominal pain and improvement of appetite. Tenderness over the left lower quadrant with mild rebound pain over the bilateral lower abdomen was noted. However, obturator sign, psoas sign, and Rovsing sign for acute appendicitis were all negative.¹ With progressive elevation of inflammatory index and abdominal symptoms, intra-abdominal infection was suspected. Abdominal computed tomography revealed ectopic appendicitis with the swollen appendix in the deep lower pelvic cavity (Figure 1). In addition, the duodenum failed to cross to the left side, resembling malrotation (Figure S1), with small intestine

loops behind the ventrally located ascending colon (A-colon) (Figure S2). Laparoscopic appendectomy was performed. Pathology and culture of the surgical specimen confirmed the diagnosis of appendicitis without pelvic adhesion. Follow-up small bowel series at 4 months after appendectomy revealed the small bowel in the normal position, excluding the possibility of intestinal malrotation (Figure S3). With the cecum and ascending colon unattached to the lateral peritoneum, the diagnosis of mobile cecum syndrome was thus reconfirmed^{2,3} (Figure 2). Appendices can be detected in about half of cases by an experienced sonographer with tissue harmonic imaging transabdominal sonography.⁴ However, in about 8% patients, the cecum was located in the deep lower pelvis; the appendix could not depicted at all in this case.⁴

Herein, we report the unusual clinical presentation of this case to reiterate the need for a high index of suspicion for potential anatomical variation of the appendix when confronting patients with acute abdominal pain. The incidence of mobile cecum has been estimated to be as high as 10–20% in the general population.² Despite its high prevalence, infections of mobile cecum were rarely reported as the cause of acute abdominal pain.⁵ Because this condition may present with atypical clinical signs and symptoms, timely diagnosis of the underlying causes for acute abdominal pain could be delayed.

Conflicts of interest

None.

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Figure 1 Multiplanar reconstruction of abdominal computed tomography revealed the position of the cecum (C) and swollen appendix (arrows) in the deep lower pelvis.

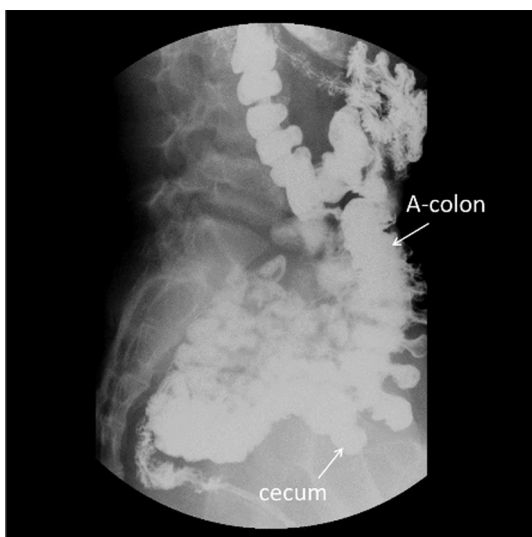


Figure 2 Small intestine loops behind the ascending colon. The ascending colon (A-colon) is located on the ventral side. With the cecum and A-colon unattached to the lateral peritoneum, the diagnosis was confirmed as mobile cecum.

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References

1. Hardin Jr DM. Acute appendicitis: review and update. *Am Fam Physician* 1999;**60**:2027–34.
2. Rogers RL, Harford FJ. Mobile cecum syndrome. *Dis Colon Rectum* 1984;**27**:399–402.
3. Toprak H, Bilgin M, Atay M, Kocakoc E. Diagnosis of appendicitis in patients with abnormal position of the appendix due to mobile caecum. *Case Rep Surg* 2012;**2012**:921382.
4. Yabunaka K, Katsuda T, Sanada S, Fukutomi T. Sonographic appearance of the normal appendix in adults. *J Ultrasound Med* 2007;**26**:37–43.
5. Makama JG, Ahmed A, Ukwenya Y, Mohammed I. Mobile caecum and ascending colon syndrome in a Nigerian adult. *Ann Afr Med* 2009;**8**:133–5.

Appendix A. Supplementary data

Supplementary data related to this article can be found at <http://dx.doi.org/10.1016/j.pedneo.2015.01.007>.