

Acute purulent diverticulitis in the cecum: case report

Diverticulitis aguda purulenta en el ciego: reporte de caso

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Abstract

A 40-year-old female with a 24-hour course of abdominal pain suggestive of acute appendicitis. An emergency laparotomy was performed, finding plastron in the cecum and ascending colon, color changes, with purulent liquid and 5 cm in diameter, fixed to Toldt's. It was decided to perform a right hemicolectomy with an ileotransverse end-to-side anastomosis with adequate postsurgical evolution. The histopathological report showed acute purulent diverticulitis of the cecum, which is very low incidence in the Mexican population, that's why this case report is carried out.

Keywords: Acute Abdomen. Appendicitis. Diverticulitis. Cecum. Acute purulent diverticulitis.

Resumen

Mujer de 40 de años con cuadro de dolor abdominal de 24 h de evolución clínicamente sugestiva de apendicitis aguda. Se realiza laparotomía de urgencia, encontrando plastrón en ciego y colon ascendente, irregular, pétreo, con cambios de coloración, de 5 cm de diámetro, fijo a la fascia de Toldt, con líquido purulento. Se decide realizar hemicolectomía derecha con ileotransverso anastomosis terminolateral, con adecuada evolución posquirúrgica. El reporte histopatológico mostró diverticulitis aguda purulenta de ciego, lo cual es de baja incidencia en la población mexicana, motivo por el que se realiza este reporte de caso.

Palabras clave: Abdomen agudo. Apendicitis. Divertículos. Ciego. Diverticulitis aguda purulenta.

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Introduction

In patients with sigmoid colon diverticulosis, acute diverticulitis can occur in up to 4%¹ in those under 50 years². Right-sided colon diverticulitis is uncommon in Western countries and has a higher incidence in Asians. It was first described in 1912, and there are still no established management guidelines³. Right-sided colon diverticula are associated with congenital disease and typically present in isolation, with a clinical picture similar to appendicitis⁴⁻⁶.

The objective is to report a rare case in our population with successful outcomes and conduct a literature review.

Case report

A 40-year-old woman with a 24-hour history of acute abdomen, starting in the mesogastrium with migration to the right iliac fossa, peritoneal irritation, nausea, vomiting of gastric contents, and fever of 38.5 °C. Abdominal ultrasound revealed the presence of a

thickened appendix with free periappendicular fluid. Laboratory findings showed leukocytosis, lymphocytopenia, neutrophilia, and 3% bands.

A mid-infra and supraumbilical approach was performed, finding a cecal phlegmon with approximately 5 cm diameter color changes, fixed to the Toldt fascia,

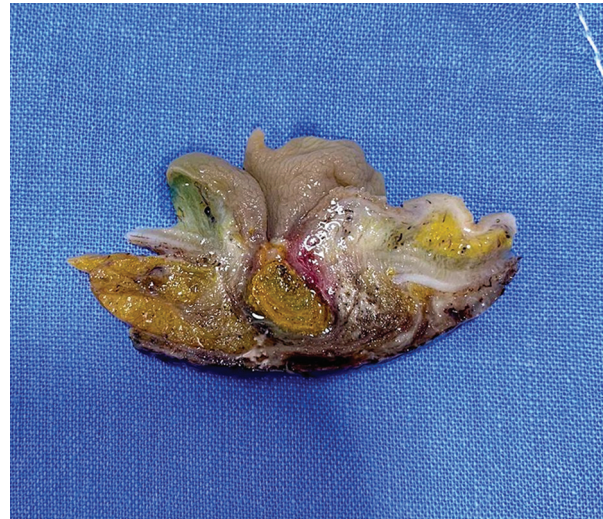


Figure 2. Ileum sections show unaltered mucosa.



Figure 1. Histopathological section. Microscopically, the section of the lesion in the cecum shows invagination of the mucosa dissecting the muscularis propria layer; it appears coated by intense lymphocytic infiltration with polymorphonuclear cells, cellular debris, and focal identification of coccal bacterial colonies; the inflammatory infiltrate extends throughout the wall and infiltrates adipose tissue. In the colon mucosa, two inflammatory polyps are identified; the remaining mucosa of the cecum and colon is coated with long crypts with variable mucoproduction, surrounded by its own lamina where a significant increase in the quantity of lymphocytes can be observed, along with plasma cells and a few eosinophils.



Figure 3. Diverticulum in the cecum. On section, the ileum mucosa appears brown, yellowish, with edematous appearance; the colon mucosa shows an ulcerated, pinpoint, retractable lesion at the cecum level of 1 cm in major axis; the surrounding mucosa is wine-red; on section, invagination of the mucosa extending to the serosa is identified, surrounded by purulent material; the lumen is occupied by fecal matter. The remaining mucosa presents two 0.3 cm yellowish and soft polypoid formations. Adjacent adipose tissue shows congestive vessels; no other alterations observed.



Figure 4. 15 cm-long surgical piece consisting of a 13 cm-long cecum, with an external surface of wine-red color, partially covered by purulent material extending to adipose tissue. The 10 cm-long cecal appendix appears unchanged, along with a 3 cm-long segment of ileum, the proximal surgical margin of 1 cm diameter, and the distal surgical margin of 3 cm diameter. Microscopically, ileum sections show unaltered mucosa. The cecal appendix mucosa exhibits lymphoid follicle hyperplasia. Surgical margins are lesion-free, without histologically significant changes.

with purulent fluid. Right hemicolectomy with ileo-transverse terminolateral anastomosis was performed with adequate recovery.

Histopathological report described invagination of the mucosa of the muscularis propria layer (Fig. 1), which was intensely infiltrated by lymphocytes and polymorphonuclear cells, cellular debris, and locally identified bacterial colonies and inflammatory infiltrate extending throughout the wall and infiltrating adipose tissue. Two inflammatory polyps were identified in the colon. The mucosa of the cecal appendix showed hyperplasia of lymphoid follicles and lesion-free edges without histologically significant alterations (Fig. 2). Report:

- Acute purulent diverticulitis in the cecum (Fig. 3).
- Purulent peritonitis.
- Inflammatory polyps (two) in colon mucosa.
- Follicular hyperplasia of the cecal appendix.

Discussion

Acute abdomen has different etiologies, but the most frequent is acute appendicitis, and one of the rarest differential diagnoses, due to its low incidence, is presented in this article. Acute purulent diverticulitis of the cecum is a rare condition with clinical manifestations of acute appendicitis, hence often confused with it. In our patient, ultrasound revealed the presence of a thickened appendix, which appeared normal during surgery. Diagnosis is challenging, and abdominal computed tomography is the imaging modality of choice, but in this case, it was not performed as acute appendicitis was suspected based on clinical criteria, ultrasound report, and impaired laboratory studies. Therefore, we obtained the intraoperative diagnosis, which was later confirmed with the histopathological report (Fig. 4).

Conclusions

Ascending colon diverticular disease constitutes 1.5% of all diverticula. Its clinical presentation can be taken for appendicitis, making clinical diagnosis difficult. Its pathophysiology and treatment of choice remain unknown to this date. Various case studies recommend conservative treatment, which is not indicated in patients with acute abdomen, which was not our case, as the patient presented with a clear picture of acute abdomen, which resolved surgically uneventfully.

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Conflicts of interest

None declared.

Ethical disclosures

Protection of human and animal subjects. The authors declare that no experiments were performed on humans or animals for this study.

Confidentiality of data. The authors declare that they have followed the protocols of their work center on the publication of patient data.

Right to privacy and informed consent. The authors have obtained the written informed consent of the patients or subjects mentioned in the article.

The corresponding author is in possession of this document.

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