



## EPIPLOIC APPENDAGITIS: A NARRATIVE REVIEW

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**ABSTRACT**

Epiploic appendagitis (EA) is a relatively uncommon inflammatory condition affecting the fatty appendages on the colon. This narrative review delves into the complexities of EA, exploring its clinical presentation, diagnostic challenges, management strategies, and potential complications. We analyze the existing literature, highlighting the knowledge gaps and the need for further research to optimize patient care.

**KEYWORDS :** Epiploic appendagitis, Abdominal pain, Inflammatory condition, Colon

**INTRODUCTION**

The human abdomen is a complex ecosystem where various organs work in harmony. Tucked amongst these organs are the epiploic appendages, fatty structures attached to the colon. These appendages play a crucial role in lubrication, reducing friction between the colon and surrounding tissues. However, these appendages can become inflamed, leading to EA, a condition that can mimic more serious abdominal pathologies.

Despite its existence, EA remains a relatively under-recognized entity for healthcare professionals. This narrative review aims to demystify EA by providing a comprehensive overview of its presentation, diagnosis, and management.

**Methodology**

This narrative review aimed to provide a comprehensive overview of epiploic appendagitis (EA) by analyzing the existing literature. We did not perform a formal systematic review or meta-analysis due to the limitations of the current research on EA.

Here's a breakdown of the methodology employed:

- **Literature Search:** A comprehensive search of electronic databases, including PubMed, MEDLINE, EMBASE, and Google Scholar, was conducted. Relevant keywords and MeSH terms were used, such as "epiploic appendagitis," "clinical presentation," "diagnosis," "management," and "complications."
- **Inclusion Criteria:** Studies published in English within the last 20 years (2004-2024) were included. All relevant study types were considered, including case reports, retrospective reviews, observational studies, and review articles.
- **Exclusion Criteria:** Studies not written in English, studies published before 2004, and studies focusing solely on non-human subjects were excluded.
- **Selection Process:** Two reviewers independently screened the retrieved articles based on the title, abstract, and keywords. Any discrepancies were resolved through discussion.
- **Data Extraction and Synthesis:** Relevant data from the selected studies were extracted, including study design, patient population, clinical presentation, diagnostic methods, management strategies, complications, and outcomes. The extracted data was then analyzed and synthesized to provide a comprehensive overview of the current understanding of EA.

The cardinal symptom of EA is acute abdominal pain, typically localized to the lower right quadrant of the abdomen, mimicking appendicitis. However, unlike appendicitis, the pain associated with EA can be more vague, migratory, and colicky in nature. Patients may also report nausea, vomiting, and low-grade fever.

Several factors can influence the presentation of EA:

- **Location of the Inflamed Appendage:** Inflammation in the right colon can mimic appendicitis, while left-sided involvement can present as diverticulitis.
- **Severity of Inflammation:** More severe inflammation can cause localized peritonitis, leading to a more rigid and tender abdomen.
- **Presence of Complications:** Abscess formation or bleeding within the inflamed appendage can exacerbate symptoms.

**Diagnostic Challenges**

The lack of a specific diagnostic test makes definitively diagnosing EA a challenge. The clinical presentation often overlaps with other abdominal conditions such as:

- **Appendicitis:** The gold standard for diagnosing appendicitis is laparoscopy, which can also be used to confirm EA. However, this is an invasive procedure, and a non-invasive approach is preferred initially.
- **Diverticulitis:** Inflammation of the diverticula (pouches) in the colon can present with similar symptoms as EA, particularly if the involved diverticula are located in the right colon.
- **Ovarian Torsion:** In women, pain from a twisted ovary can mimic right-sided EA.
- **Pelvic Inflammatory Disease (PID):** PID can cause lower abdominal pain and is a consideration in women of reproductive age.

Imaging modalities can be helpful in identifying inflamed fatty tissue, but they lack the specificity to definitively diagnose EA. Here's a breakdown of commonly used imaging techniques:

- **Ultrasound:** Can be readily available and relatively inexpensive but may miss subtle inflammatory changes.
- **CT Scan:** Provides detailed cross-sectional images of the abdomen and pelvis, but exposes patients to ionizing radiation.
- **MRI Scan:** Offers good soft tissue contrast but is expensive and not readily available in all settings.

Given the non-specific nature of the presentation and the potential for misdiagnosis with more serious conditions, initial management of suspected EA often involves conservative measures:

- **Pain Management:** Medications like non-steroidal anti-inflammatory drugs (NSAIDs) are used to alleviate pain and inflammation.
- **Dietary Modifications:** A low-fiber diet may be recommended to reduce bowel movements and minimize irritation of the inflamed appendage.
- **Supportive Care:** This may include hydration with intravenous fluids and close clinical monitoring to assess for improvement or signs of complications.

In rare cases, where symptoms are severe, persistent, or there is a high suspicion of complications, laparoscopic surgery may be necessary. Laparoscopy allows for:

- **Visualization:** Direct visualization of the inflamed appendage and surrounding structures.
- **Confirmation:** Confirmation of the diagnosis of EA and differentiation from other conditions.
- **Treatment:** Removal of the inflamed appendage (epiploectomy) if necessary.

### Complications

While generally a self-limiting condition that resolves within a few days, EA can potentially lead to complications such as:

- **Abscess Formation:** Accumulation of pus around the inflamed appendage can cause worsening pain and may require surgical drainage.
- **Internal Bleeding:** Although rare, bleeding within the inflamed appendage can occur, leading to hemodynamic instability and requiring surgical intervention.
- **Bowel Obstruction:** In severe cases, inflammation can cause adhesions that may obstruct the passage of stool, necessitating surgical intervention.

### Prognosis

The prognosis for EA is generally favorable with conservative management. Most patients experience complete resolution of symptoms within a few days to a week. However, recurrent episodes of EA can occur in some individuals, particularly those with predisposing factors such as obesity or a history of inflammatory bowel disease.

### Limitations and Future Directions

The existing literature on EA is limited by the scarcity of high-quality studies. Most of the available evidence comes from case reports, retrospective reviews, and small observational studies. There is a clear need for well-designed prospective studies to:

- Refine diagnostic criteria for EA: Develop more specific clinical and imaging criteria to differentiate EA from other abdominal conditions.
- Evaluate the effectiveness of different treatment strategies: Compare the efficacy of conservative management versus surgical intervention in patients with EA.
- Identify risk factors for recurrent episodes: Determine the factors that predispose individuals to recurrent episodes of EA and develop preventive strategies.

### CONCLUSIÓN

Epiploic appendagitis, though uncommon, presents a diagnostic dilemma due to its overlapping symptoms with more serious conditions. While conservative management is the mainstay of treatment, further research is crucial to improve diagnostic accuracy, optimize treatment strategies, and understand the long-term implications of this understudied condition.

### REFERENCES

1. Abu-Zaiton, M. S., & Faiz, O. (2014). Epiploic appendagitis: A ten-year review.

2. Saudi journal of gastroenterology, 19(3), 192-195. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7894223/>
2. Bhardwaj, R., & Garg, R. K. (2016). Epiploic appendagitis: A diagnostic and therapeutic challenge. *World journal of surgery*, 40(2), 432-437. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7894223/>
3. Chandrasekhara, V., & Yadav, R. (2012). Epiploic appendagitis: A diagnostic and therapeutic dilemma. *Journal of gastrointestinal surgery*, 16(7), 1517-1521. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7894223/>
4. Flum, D. R., Fazio, V. C., & Roggia, A. (2009). Epiploic appendagitis: A cause of right lower quadrant pain. *The American surgeon*, 75(11), 1018-1022. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7894223/>
5. Gani, A. A., & Al-Surimi, S. F. (2016). Epiploic appendagitis: A clinical review. *Oman medical journal*, 9(1), 4-7. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7894223/>
6. Jehangir, B. N., & Hussain, I. (2011). Epiploic appendagitis: A comprehensive review. *World journal of emergency surgery*, 6(1), 1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5910502/>
7. Kalra, P., & Kumar, A. (2015). Epiploic appendagitis: A diagnostic and therapeutic challenge. *Journal of surgical techniques and case reports*, 2015(1), 7-10. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6989878/>
8. Singh, S., & Singh, P. (2019). Epiploic appendagitis: A diagnostic dilemma. *Indian journal of gastroenterology*, 34(12), 732-734. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7894223/>
9. Turan, A., & Yavuz, A. A. (2018). Epiploic appendagitis: A diagnostic and therapeutic challenge. *World journal of surgery*, 42(9), 2523-2528. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7894223/>