

## **Emergency General Surgery**

### **Practice Management Guidelines: Acute Appendicitis**

**I. Purpose:** Acute appendicitis is one of the most common reasons for presentation to the Emergency General Surgery service. This document outlines the management considerations of patients presenting with acute appendicitis.

**II. Guideline:**

**A. Initial Evaluation with Concern for Acute Appendicitis**

- a. Labs
  - i. CBC
  - ii. BMP
- b. Imaging
  - i. CT Abdomen/Pelvis with IV Contrast

**B. Management**

- a. Antibiotic Therapy - 4 days after source control for perforated; no appendectomy = 10 days; appendectomy – stop postoperatively
  - i. Without Shock
    - a. First-line: Ceftriaxone/Metronidazole
    - b. Severe Penicillin Allergy: Levofloxacin/Metronidazole
  - ii. Sepsis/Multidrug Resistance Risk
    - a. First-line: Piperacillin/Tazobactam
    - b. Severe Penicillin Allergy: Vancomycin/Cefepime/Metronidazole
  - iii. Duration
    - a. If uncomplicated, stop postoperatively
    - b. If perforated, stop four days postoperatively
    - c. If nonoperative management, ten-day course
- b. NPO Order pending operative plan
- c. Emergency General Surgery Consultation/Admission
- d. Operative Management with Laparoscopic Appendectomy
- e. Considerations for Nonoperative Management
  - i. Patient preference
  - ii. Severe inflammation/phlegmon/perforation on CT which would necessitate ileocectomy

- iii. Excessive surgical/perioperative risk factors
- iv. Appendicolith on CT is associated with higher rate of recurrent appendicitis
- v. Failure of nonoperative management in the pregnant patient could result in fetal demise
- vi. Consider interval appendectomy in patients  $\geq 40$  years old with perforated appendicitis due to cancer risk
  
- f. Follow-up
  - i. 7-14 day follow up either telemedicine or in-person with review of pathology (if operative)
  - ii. Consideration of colonoscopy referral if risk for colon cancer

### **III. References**

de Almeida Leite RM, Seo DJ, Gomez-Eslava B, Hossain S, Lesegretain A, de Souza AV, Bay CP, Zilberstein B, Marchi E, Machado RB, Barchi LC, Ricciardi R. Nonoperative vs Operative Management of Uncomplicated Acute Appendicitis: A Systematic Review and Meta-analysis. *JAMA Surg.* 2022 Sep 1;157(9):828-834.

Rushing A, Bugaev N, Jones C, Como JJ, Fox N, Cripps M, Robinson B, Velopoulos C, Haut ER, Narayan M. Management of acute appendicitis in adults: A practice management guideline from the Eastern Association for the Surgery of Trauma. *J Trauma Acute Care Surg.* 2019 Jul;87(1):214-224.

Di Saverio S, Podda M, De Simone B, Ceresoli M, Augustin G, Gori A, Boermeester M, Sartelli M, Coccolini F, Tarasconi A, De' Angelis N, Weber DG, Tolonen M, Birindelli A, Biffl W, Moore EE, Kelly M, Soreide K, Kashuk J, Ten Broek R, Gomes CA, Sugrue M, Davies RJ, Damaskos D, Leppäniemi A, Kirkpatrick A, Peitzman AB, Fraga GP, Maier RV, Coimbra R, Chiarugi M, Sganga G, Pisanu A, De' Angelis GL, Tan E, Van Goor H, Pata F, Di Carlo I, Chiara O, Litvin A, Campanile FC, Sakakushev B, Tomadze G, Demettrashvili Z, Latifi R, Abu-Zidan F, Romeo O, Segovia-Lohse H, Baiocchi G, Costa D, Rizoli S, Balogh ZJ, Bendinelli C, Scalea T, Ivatury R, Velmahos G, Andersson R, Kluger Y, Ansaloni L, Catena F. Diagnosis and treatment of acute appendicitis: 2020 update of the WSES Jerusalem guidelines. *World J Emerg Surg.* 2020 Apr 15;15(1):27. doi: 10.1186/s13017-020-00306-3. PMID: 32295644; PMCID: PMC7386163.

### **IV. Author**

Michael C. Smith, MD

December 18, 2023