

## **Resident: First Place**

### **“Actinomyces Masquerading as Appendicitis”**

**CATEGORY:** Clinical Inquiry

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**ABSTRACT:** Introduction: Actinomycosis is a chronic granulomatous disease, caused by gram positive, filamentous, anaerobic bacteria that can usually be found in the oral cavity and the intestinal tract. It can cause granulomas, extensive fibrosis, necrosis, abscesses and fistulas if given the opportunity to migrate via breaks in tissue. Abdominal actinomyces can be hard to diagnose due to its presentation with nonspecific symptoms and tendency to present like other common diseases such as Crohn’s disease, malignancy, or tuberculosis. In a case report and literature review by G.A. Gómez-Torres it was found most cases of actinomyces appendicitis was due to a perforated appendix (75%). In this report, we present a case where abdominal actinomyces presented with classic signs of appendicitis without perforation. Case: A 36-year-old male with no past medical history presented to the office with complaints of epigastric and right lower quadrant abdominal pain with 2 episodes of emesis since the morning. He admitted to eating spicy food and consuming a lot of coffee. On physical exam, the patient had moderate tenderness in the epigastric region and mild tenderness at McBurney’s point. He was treated conservatively with a PPI and pain management for gastritis. His symptoms not only did not improve but also worsened before he presented to the ED later that day. White blood cell count was 12.1. Abdominal ultrasound and CT revealed a distended appendix with surrounding mesenteric stranding suggestive of appendicitis. The patient was started on IV piperacillin/tazobactam, fluids, and pain management and underwent a laparoscopic appendectomy. The appendix was sent to pathology and cultures grew actinomyces. Further discussion with patient uncovered the patient had recently undergone a dental procedure. After recovery from surgery the patient was recommend to start IV antibiotics via PICC line for 4 to 6 weeks followed by oral antibiotics for 6 months. The patient elected to get a 2nd opinion from an Infectious Disease specialist who recommended the same. Ultimately the patient decided only to go on oral antibiotics for 6 months instead. Discussion: Abdominal actinomycosis is a difficult diagnosis to make because it is a rare condition that can present like many other more common diseases. It is known as the “great pretender” and should be considered when a patient presents with a slow indolent course, unlike our patient who had an unusually rapid progression, and nonspecific abdominal symptoms with a history of associated risk factors. In fact about 20% of cases involve the abdomen with 0.02% to 0.06% presenting as appendicitis. Fewer than 10% are diagnosed preoperatively. Due to the lack of specific laboratory and imaging studies, diagnosis is usually made by histology after unnecessary surgical processes. Studies have emphasized the use of Gram stain to identify the bacteria and prevent any delay of treatment and stop unnecessary surgical procedures.