SIU / St. John's Children's Hospital Appendicitis Antibiotic Guidelines

1. **Simple/Uncomplicated Appendicitis**: appendicitis without visible perforation of the appendix and/or the presence of stool in the abdomen or pelvis
    a. Antibiotic regimen: IV ceftriaxone + metronidazole
        i. Beta-lactam allergy: IV ciprofloxacin + metronidazole
    b. Duration: pre-op only *
2. **Gangrenous Appendicitis**: appendicitis that does not meet criteria for perforated appendicitis, but with visible necrosis or appendiceal tissue
    a. Antibiotic regimen: IV ceftriaxone + metronidazole
        i. Beta-lactam allergy: IV ciprofloxacin + metronidazole
    b. Duration: up to 24 hours post-op*
3. **Perforated Appendicitis**: appendicitis with visible perforation of the appendix and/or stool in the abdomen or pelvis
    a. Antibiotic regimen: IV ceftriaxone + metronidazole
        i. Beta-lactam allergy: IV ciprofloxacin + metronidazole
    b. Give IV therapy at least 48 – 72 hours post-op *and* until the following discharge criteria are met, then change to PO**:
        i. Adequate PO intake
        ii. Pain controlled
        iii. Ambulating
        iv. Afebrile x 24 hours
        v. WBC less than 12,000
    c. Recommended PO agent is amoxicillin / clavulanate
        i. Beta-lactam allergy: PO ciprofloxacin + metronidazole
    d. Duration: 7 days total antibiotics (IV + PO)
4. **Intra-Abdominal Abscess**
    a. Antibiotic regimen: IV ceftriaxone + metronidazole
        i. Beta-lactam allergy: IV ciprofloxacin + metronidazole
    b. Obtain cultures of abscess fluid
    c. Consider ID consult
    d. Give IV therapy at least 72 hours post-op *and* until the following discharge criteria are met, then change to PO**:
        i. Adequate PO intake
        ii. Pain controlled
        iii. Ambulating
        iv. Afebrile x 24 hours
        v. WBC less than 12,000
5. **Non-operative Appendicitis**
    a. Antibiotic regimen: IV ceftriaxone + metronidazole
        i. Beta-lactam allergy: IV ciprofloxacin + metronidazole

   b. Give IV therapy at least 48 – 72 hours post-op and until the following discharge criteria are met, then change to PO**:
      i. Adequate PO intake
      ii. Pain controlled
      iii. Ambulating
      iv. Afebrile x 24 hours
      v. WBC less than 12,000
   c. Recommended PO agent is amoxicillin / clavulanate
      i. Beta-lactam allergy: PO ciprofloxacin + metronidazole
   d. Duration: 7 days total antibiotics (IV + PO)
6. <u>Piperacillin / tazobactam</u>
   a. Indications:
      i. Clinical failure after appropriate IV antibiotics (ceftriaxone + metronidazole) for at least 72 hours
      ii. Readmission/recent hospitalization more than 4 days
      iii. Immunocompromised
      iv. Critically ill
   b. Consider ID consult
7. <u>Antibiotic Dosing</u>
   a. Amoxicillin / clavulanate: 45 mg/kg/day amoxicillin PO divided q12h (max dose 875 mg amoxicillin)
   b. Ceftriaxone: 50 mg/kg/dose IV q24h (max dose 2000 mg)
   c. Ciprofloxacin
      i. IV: 10 mg/kg/dose IV q12h (max dose 400 mg)
      ii. PO: 10 mg/kg/dose PO q12h (max dose 750 mg)
   d. Metronidazole
      i. IV: 30 mg/kg/dose IV q24h (max dose 1500 mg)
      ii. PO: 10 mg/kg/dose PO q8h (max dose 500 mg)
      iii. PO: 15 mg/kg/dose PO q12h (max dose 750 mg)
   e. Piperacillin / tazobactam: 100 mg/kg/dose piperacillin IV q8h (max dose 3000 mg piperacillin)
      i. If > 40 kg, then 3 g piperacillin IV q6h (max daily dose 16 g piperacillin)

8. Other considerations
   a. *If the patient goes to the Operating room 12 hours or more after ceftriaxone and metronidazole dosing, repeat dose prior to surgery
   b. **If patient does not meet clinical criteria at 48 – 72 hours, IV antibiotic therapy should be continued until clinically well or until post-operative day 7, whichever comes first

9. References

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d. Nadler et al. The surgical society guidelines on antimicrobial therapy for children with appendicitis. Surg Infect. 2008;9(1):75-83.
e. St. Peter SD et al. A simple and more cost-effective antibiotic regimen for perforated appendicitis. J Pediatr Surg. 2006;41:1020-1024.
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h. Desai et al. Safety of a new protocol decreasing antibiotic utilization after laparoscopic appendectomy for perforated appendicitis in children: A prospective observational study. J.Pediatr Surg 50 (2015) 912-914