

## SCIENTIFIC SESSION III (CONT.)

27

**HOME INTRAVENOUS VERSUS ORAL ANTIBIOTICS FOLLOWING APPENDECTOMY FOR PERFORATED APPENDICITIS, A RANDOMIZED CONTROLLED TRIAL**

David A. Klima, MD, Blair A. Wormer, MD, Paul D. Colavita, MD, Chukwuma N. Eruchalu, Amanda L. Walters, MS, Graham H. Cosper, MD, B Todd Heniford, MD, Andrew M. Schulman, MD.

*Carolinas Medical Center, Charlotte, NC, USA.*

**Purpose:**

To compare the effect of home intravenous versus oral antibiotic therapy on complication rates and resource utilization following appendectomy for perforated appendicitis.

**Methods:**

IRB approved randomized controlled trial including patients aged 4-17 with surgically treated perforated appendicitis from 1/2011 - 9/2013. Perforation was defined as a hole in the appendix or intra-abdominal fecalith at time of operation, and further divided into three grades: I-contained perforation, II-localized contamination to right gutter/pelvis, III-diffuse contamination extending to left gutter/upper quadrants. One hundred thirty-seven consecutive patients underwent appendectomy for perforated appendicitis. All received IV ertapenem while inpatients. Postoperatively, 80(58%) were consented and randomized by perforation grade to complete a 10 day course of antibiotic therapy at home with either IV ertapenem via PICC line, or oral amoxicillin/clavulanate. Criteria for discharge included >24hrs without fever (>101.5°), tolerating diet, and pain control with oral medications. Thirty day postoperative complication rates including abscess, readmission, and wound infection, as well as hospital charges, were compared.

**Results:**

Forty-three (54%) patients were randomized to the IV group and 37(46%) to the oral group. IV patients were slightly older (12.4±3.5yrs v. 10.2±3.6yrs;p<0.01) with higher BMI(21±6 v. 18±4;p<0.05) than oral patients; however there were no differences in gender, race, comorbidities, temperature at admission(101.5°±1.6° v. 101.5°±1.5°;p>0.05), WBC count at admission(17.9±6.6 v. 16.8±4.8;p>0.05), or perforation grade (I-20.9% v. 24.3%, II-32.6% v. 35.1%, III-46.5% v. 40.5%;all p>0.05). When comparing IV to oral, there was no difference in operative approach(Laparoscopic-95.4% v. 91.7%, Open-2.3% v. 8.3%, Converted-2.3% v. 0;all p>0.05), length of stay(4.3±1.5days v. 4.2±1.9days;p>0.05), postoperative abscess rate(11.9% v. 8.3%;p>0.05), wound infection(0 v. 5.6%;p>0.05), or readmission rate(14.3% v. 16.7%;p>0.05). Total hospitalization charges were significantly higher for IV versus oral therapy (\$42,049±\$8,404 v. \$34,029±\$8,064; p<0.0001).