| Background Statistics | | |
|---|---|---|
| | Count | % |
| Males | 20 | |
| Females | 17 | |
| Avg Age | 47.1 | |
| Avg BMI | 22.5539394 | |
| Avg BMI Post-Rx | 22.4904545 | |
| CF | 15 | 40.5 |
| CF Modulator | 9 | 60.0 |
| Structural Lung Disease (Non-CF) | 16 | 43.2 |
| Any Form Lung Disease (CF = Structural) | 25 | 67.6 |
| Autoimmune Disease | 3 | 8.1 |
| Immunosuppressed | 10 | 27.0 |
| DM | 7 | 36.8 |
| Treated NTM in Past | 28 | |
| Avg # of Trials Before Clofazimine | 1.31 | |

Table 1: basic patient characteristics

***Disclosures.*** **All authors:** No reported disclosures.

**2261. Oral Fosfomycin for Treatment of Urinary Tract Infections Due to Extended-Spectrum β-Lactamase and Carbapenem-Resistant Enterobacteriaceae**

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**Session:** 246. Clincal Outcomes of Infections with Resistant Organisms
*Saturday, October 5, 2019: 12:15 PM*

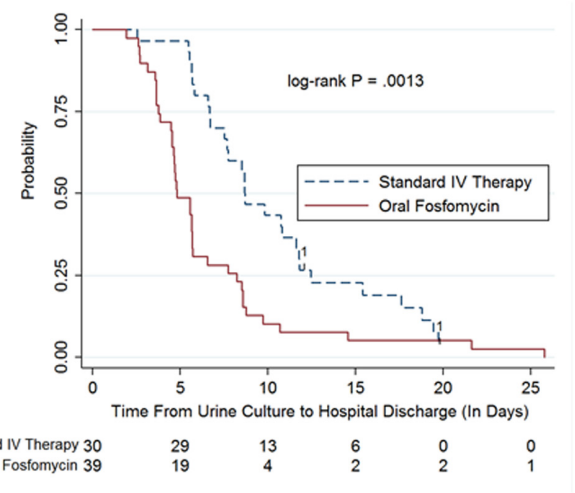
***Background.*** Urinary tract infections (UTIs) caused by extended spectrum β-lactamase (ESBL) and carbapenem-resistant Enterobacteriaceae (CRE) pose a significant challenge due to limited treatment options. The objective of this study was to compare outcomes in patients treated with standard IV therapy or oral fosfomycin for ESBL and CRE UTIs.

***Methods.*** Retrospective cohort review of inpatients diagnosed with ESBL and CRE UTIs between June 2016 and September 2017 at a seven-hospital system. Patients with polymicrobial UTI, bloodstream infections, additional anatomical site with ESBL/CRE, or those requiring renal replacement therapy were excluded. Only patients with documented fosfomycin susceptible isolates *in vitro* were included. Eligible patients were divided into two groups: standard IV therapy (SDTx) or fosfomycin therapy (FOS). FOS group could receive ≤72 hours of other active antibiotics from urine culture collection (UTI onset) to the first dose of fosfomycin. Quick sequential organ failure assessment (qSOFA) scores were calculated at UTI onset. The primary endpoint was functional cure defined as resolution of symptoms without microbiological failure. Microbiological failure was defined as a positive urine culture within the index hospitalization or 30 days.

***Results.*** There were 70 patients included: 31 treated with SDTx and 39 with FOS. ESBL *Echerichia coli* was most common, accounting for 58% of UTIs in SDTx and 71.8% in FOS. ESBLs accounted for 71% ($n$ = 22/31) of UTIs in SDTx and 89.7% ($n$ = 35/39) in FOS. The overall qSOFA score was 0.7 (range, 0–3) with the majority of patients scoring < 2 (80.6% in SDTx vs. 92.3% in FOS; $P$ = 0.29). There was no significant difference in functional cure rate ($n$ = 30, 96.8% SDTx vs. $n$ = 37, 94.9% FOS; $P$ = 0.83). SDTx patients had a longer length of stay (15.3 days vs. 7.3 days with FOS; $P$ = 0.04), duration of active therapy (7.6 days vs. 3 days with FOS; $P$ < 0.0001), and time from UTI onset to discharge (10.3 days vs. 6.6 days with FOS; $P$ = 0.002). There were no adverse drug events reported.

***Conclusion.*** Oral fosfomycin was a safe and effective alternative to standard IV therapy for ESBL and CRE UTIs in this investigation and demonstrated similar functional cure rates. Additionally, patients treated with fosfomycin had shorter hospitalizations and durations of antibiotic therapy.

| Clinical Outcomes | Oral Fosfomycin (n=39) | Standard IV Therapy (n=31) | p-value |
|---|---|---|---|
| **Primary Endpoint** | | | |
| Functional cure, n (%) | 37 (94.9) | 30 (96.8) | 0.59 |
| **Secondary Endpoints** | | | |
| Microbiologic failure, n (%) | 2 (5.1) | 1 (3.2) | 0.12 |
| Hospital length of stay; mean days ± SD | 7.3 ± 6.7 | 15.3 ± 20.9 | 0.04 |
| Active antibiotic duration; mean days ± SD | 3 ± 2 | 7.6 ± 3.6 | <0.0001 |
| UTI onset to discharge; mean days ± SD | 6.6 ± 4.8 | 10.3 ± 4.8 | 0.002 |
| Acute kidney injury, n (%) | 4 (10.3) | 3 (9.7) | 0.94 |
| 30-day recurrence, n (%) | 5 (12.8) | 1 (3.2) | 0.15 |
| 30-day readmission, n (%) | 6 (15.4) | 10 (32.3) | 0.10 |
| In-hospital mortality, n (%) | 0 (0) | 2 (6.5) | 0.11 |




***Disclosures.*** **All authors:** No reported disclosures.

**2262. Ceftazidime–Avibactam vs. Polymyxin B in the Treatment of Infections Due to Carbapenem-Resistant Enterobacteriaceae**

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**Session:** 246. Clincal Outcomes of Infections with Resistant Organisms
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***Background.*** Pharmacotherapy for carbapenem-resistant Enterobacteriaceae (CRE) infections is limited. There is a paucity of evidence to guide optimal management of CRE infections. Ceftazidime–avibactam, a novel cephalosporin/β-lactamase inhibitor, may be a reasonable alternative to colistin for CRE infections, but data on polymyxin B (PB) are lacking. Given the improved pharmacokinetic profile of PB compared with colistin, we sought to evaluate clinical and microbiological outcomes of patients treated with CAZ-AVI vs. PB for CRE infections.

***Methods.*** We conducted retrospective cohort study in adult patients treated with CAZ-AVI or PB for a CRE infection between June 2010 and August 2018. The primary outcome was all-cause mortality at 30 days. Secondary outcomes included clinical cure, microbiological cure, and development of resistance. Endpoints were analyzed using standard statistical measures. The influence of clinical variables other than antimicrobial therapy was assessed in a multivariable regression analysis.

***Results.*** The study included 117 patients, with 42 patients receiving CAZ-AVI and 75 receiving PB. Respiratory and urinary tract infections were most common, occurring in 37.6% and 20.5% of patients, respectively. Bloodstream infections occurred in 45 (35.9%) patients. In the CAZ-AVI group, there were 9 deaths (21.4%), compared with 19 deaths (25.3%) in the PB group ($P$ = 0.653). No statistically significant differences were found in clinical cure or microbiologic cure between CAZ-AVI and PB. PB was associated with a higher incidence of nephrotoxicity (19% vs. 43%; $P$ = 0.048). After adjustment for duration of therapy, combination therapy, and initial WBC, use of PB was not an independent predictor of mortality.

***Conclusion.*** No statistically significant differences between CAZ-AVI and PB were found in clinical or microbiologic outcomes in this cohort of patients treated for CRE infection. Further studies are necessary to confirm these preliminary findings to optimize clinical practice.

***Disclosures.*** **All authors:** No reported disclosures.

**2263. Fosfomycin Trometerol Use for Complicated UTIs Including Pyelonephritis, a 1-year Review of Outcomes and Prescribing Habits**

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**Session:** 246. Clincal Outcomes of Infections with Resistant Organisms
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***Background.*** Treatment of complicated urinary tract infections (UTI) caused by multidrug-resistant organisms (MDROs) is increasingly problematic given limited oral antibiotic options. In these situations, fosfomycin is increasingly used. However, there are limited outcome and pharmacokinetic data to support fosfomycin use for complicated UTIs (cUTI), especially in the upper tract. We describe fosfomycin use for complicated cUTI in our healthcare system.

***Methods.*** We performed a retrospective review of all fosfomycin prescriptions between 1/1-December 31/17 in the Los Angeles Department of Health Service system, which consists of 4 medical centers and 19 clinics that provide care to >600,000 patients annually. In our system, fosfomycin use requires ID approval. We collected demographics, clinical characteristics, adverse effects, and 30-day success