Results. Overall, ORI inhibited 99.6% of all S. aureus isolates at the susceptible breakpoint (≤0.12 mg/L; 99.9% of MSSA and 100% of MRSA; Table). S rates were generally comparable between NA-MRSA and CA-MRSA isolates for ORI (100%), and linezolid (LDZ, 100%) but lower susceptibility was observed for NA-MRSA compared to CA-MRSA for CLSI (71.9% vs. 79.1%), LEV (31.0% vs. 39.4%), and trimethoprim-sulfamethoxazole (TMP-SMX; 91.1% vs. 96.9%). ORI was as active against MRSA (MIC≥0.03/0.03 mg/L), regardless of infection status (NA, MIC≥0.03/0.06 mg/L; CA, MIC≥0.03/0.03 mg/L). ORI and LDZ remained active (100%) against all CA-MRSA subsets: CLSI R, LEV-R, MDR, and XDR. Limited activity of CLSI (69.9%) and LEV (13.1%) was observed against MRSA and each R subset, whereas TMP-SMX had >90%S for all MSSA, MRSA, and R subsets, except XDR.

Conclusion. ORI exhibited potent in vitro activity against MRSA, regardless of the infection onset or R subset, in contrast to many comparators that lack activity against both, CA-MRSA and NA-MRSA. This in vitro activity, combined with the infection time options provided to clinicians, suggests ORI is a favorable agent for treating S. aureus infections in the US caused by MRSA, including MDR and XDR strains.

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1370. Role of Clindamycin Versus Linezolid for Serious Group A Streptococcal Infections

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Session: P.76. Skin and Soft Tissue

Background. Streptococcus pyogenes can cause severe illnesses such as toxic shock syndrome and necrotizing fasciitis due to pyrogenic exotoxins. Clindamycin is added to penicillin for treatment of severe S. pyogenes infections as it is a bacterial protein synthesis inhibitor which reduces toxin production. However, clindamycin is associated with several adverse effects including C. difficile infection. Linezolid is a bacterial protein synthesis inhibitor that has been shown to provide excellent coverage for S. pyogenes including toxin inhibition in vitro, but clinical evidence is lacking. We compared outcomes of patients treated with linezolid versus clindamycin for serious S. pyogenes infections.

Methods. This was a retrospective study of patients with necrotizing fasciitis or toxic shock syndrome caused by S. pyogenes admitted to the Shock Trauma Center at University of Maryland Medical Center treated with at least 48 hours of either clindamycin or linezolid. Data collected included Sequential Organ Failure Assessment (SOFA) and Laboratory Risk Indicator for Necrotizing Fasciitis (LRINEC) severity scores, time to resolution of infection, number of surgeries, C. difficile infection, other antibiotic associated adverse effects, and mortality. Associations between patient characteristics, antibiotic groups, and outcomes were analyzed using the chi-square test, Fisher's exact test and t-test or Wilcoxon rank-sum test as appropriate (SAS v.9.4).

Results. 52 patients were included, 26 treated with clindamycin and 26 with linezolid. Most patients (85% clindamycin and 96.2% linezolid) were treated for necrotizing fasciitis. Baseline characteristics, including SOFA and LRINEC scores, were similar between the groups. There were no differences in mortality between patients treated with clindamycin versus linezolid (11.5% vs. 7.7%, p = 0.22), and resolution of infection was similar between the groups (92.3% vs. 88.5%, p = 1.0). There was no difference in adverse effects between the clindamycin and linezolid groups, including C. difficile infection (3.9% vs. 2.9% for clindamycin vs. linezolid, 0% vs. 1.0% for linezolid). Clindamycin could be an alternate to clindamycin for the treatment of serious toxin producing S. pyogenes infections. Further prospective studies are needed.

Disclosures. Emiley Heil, PharmD, MS, BCIDP. Nothing to disclose.

1371. Identification of Risk Factors to Predict Gram negative bacteria in Patients with Upper Extremity Infections

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Session: P.76. Skin and Soft Tissue

Background. Gram negative bacteria (GNB) have been identified as a cause of upper extremity infections and empiric treatment directed to both gram positive and negative organisms is often recommended. Risk-based approaches to establish need for gram-negative coverage may help to minimize unnecessary drug exposure, but further information on risk factors is currently lacking. The aim of this study was to identify risk factors associated with the isolation of GNB in patients with upper extremity infections.

Methods. We reviewed records of patients with upper extremity infections treated in two urban hospitals between March 2018 and July 2020. Prosthetic joint infections were excluded. Baseline demographic, clinical, surgical and microbiology data was collected. Multivariable logistic regression models were screened using Akaike Information Criterion to establish the best model and risk factors associated with isolation of a GNB.

Results. We identified 111 patients, the majority of whom were male with frequent history of IV drug use. Deep wound cultures in 30 (33.3%) individuals yielded a GNB, and 80% of these cases were polymicrobial. Among the GNB, most prevalent were Enterobacteriaceae (10.4%), HACEK group (6.3%), and Pseudomonas spp (4.5%)

(Table 1 and 2). Infections were mostly limited to the soft tissue structures of the hand and the forearm, with involvements of the joint and bone being second and third most common. The final model identified the use of IV medications (OR 4.14, 95% CI 3.51 - 4.80), history of IV drug use (OR 4.3, 95% CI 1.1 - 15.3), and having an open wound on presentation (OR 3.03, 95% CI 1.04 - 9.47) as factors independently associated with isolation of a GNB (Table 3).

Table 1: Baseline characteristics

| Parameter | ≥ | ≤ | v2 |
|-----------|---|---|---|
| Age, median (IQR) | 40 (18-65) | 28 (10-50) | 0.099 |
| Male | 70 | 74 | 0.275 |
| Smoking, current or past | 52.0 | 66.5 | 0.042 |
| Intravenous drug use | 36.7 | 26.8 | 0.032 |
| History of C | 91.1 | 62.5 | 0.008 |
| History of HACEK C | 10.8 | 10.8 | 0.998 |
| History of diabetes | 49.5 | 18.4 | 0.001 |
| Diabetes controlled | 7.5 | 9.2 | 0.861 |
| Residence or nursing home | 3.3 | 2.3 | 0.006 |
| Previous hospitalization | 42.3 | 37 | 0.790 |
| Hospitalization within past month | 26.7 | 17.3 | 0.150 |
| Previous upper extremity infection | 26.7 | 24.8 | 1.000 |
| History of myC | 8 | 4.2 | 0.998 |
| History of candida | 2.5 | 2.8 | 0.710 |
| Prior use of antibiotics* | 40.1 | 49.6 | 0.485 |
| Treatment with vancomycin** | 4.0 | 19.1 | 0.179 |
| Location of infection | 1.96 |
| Proximal to elbow | 3.3 | 5.7 |
| Elbow | 6.8 | 12.4 |
| Wrist | 5.0 | 12.3 |
| Forearm | 4.0 | 12.3 |
| Hand | 4.0 | 12.3 |
| Multiple sites or unspaced | 5.0 | 14.8 |
| Type of Infection | 0.142 |
| Soft tissue | 73.5 | 80.2 |
| Joint | 19.1 | 15.2 |
| Wound infection | 7.5 | 10.4 |
| Necrotizing fasciitis | 45.0 | 57.9 |
| Open wound | 45.0 | 57.9 |
| Sent for culture | 45.0 | 57.9 |
| SIRS criteria ≤ 2 | 13.3 | 26.8 |
| SIRS criteria > 2 | 86.7 | 100 |
| C. difficile, matted (SD)** | 11.0 | 20.8 |
| C. difficile, matted (s)** | 11.0 | 20.8 |

*Data shown as percentage of respective group; **data shown otherwise

Table 2: Factors independently associated with isolation of GNB (Table 3).

AUROC of 0.702 indicates acceptable model discrimination.
1372. Comparison of Healthcare Resource Utilization (HRU) Among Adult Patients Treated with Omadacycline (OMC) for Acute Bacterial Skin and Skin Structure Infections (ABSSSI) or Community-Acquired Bacterial Pneumonia (CABP) in the 30 Day Pre- and Post-OMC Prescription (Rx)

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**Session:** P-76. Skin and Soft Tissue

**Background.** Assess 30-day real-world outcomes associated with OMC for the treatment of adults with ABSSSI or CABP. Thirty-day outcomes are an important quality metric for both private and public payers. This retrospective study compared HRU among adult pts treated with OMC for ABSSSI or CABP in the 30-day pre- and post-OMC Rx periods. The pre-post study design was selected to assess how 30-day HRU changed post-OMC RX (proxy for treatment response).

**Methods.** Pts who received ≥1 OMC outpatient Rx from a large US claims database (10/2018-9/2020) were identified. Pts were classified as ABSSSI or CABP cohort based on presence of ICD-10 code near (-90 d to +30 d) OMC Rx. Within each diagnostic category, pts were classified as complicated or uncomplicated.

**Results.** During study period, 258 OMC outpatient Rx met inclusion criteria: 189 were ABSSSI and 69 were CABP. Among the 189 ABSSSI pts, 83 were uncomplicated. Most frequent common ABSSSI complicated were osteomyelitis (53%), S/B (33%), and severe pneumonia (21%). Among the 69 CABP pts, 20 were COM. Most common CABP complicated were S/B (80%) and severe pneumonia (25%). Comparison of HRU in the 30 day pre- to the 30-day post-OMC Rx period are shown in Tables 1 and 2. Among uncomplicated ABSSSI pts, IP decreased by 31% (41% vs 28%; p<0.05) while ED visits and OP were similar. Among non-complicated ABSSSI pts, IP decreased by 61% (17% vs 7%; p<0.05), ED visits decreased by 88% (16% vs 2%; p<0.01) while OP were similar. Among complicated ABSSSI pts, IP decreased by 75% (80% vs 20%; p<0.01), ED decreased by 100% (40% vs 0%; p<0.001) while OP were similar. Among complicated CABP pts, IP decreased by 75% (33% vs 8%; p<0.01), while ED visits and OP were similar.

**Conclusion.** This study provided the first real world characterization of pts treated with OMC for ABSSSI or CABP. Patients who received OMC had lower HRU in the 30 days post- OMC Rx period relative to the 30-day pre-OMC Rx period.

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