Conclusion. Few patients received extended oral antibiotics in the study period. There were no statistically significant differences in TF or ARs between the 2 groups. Yet, there was a trend toward higher rates of ARs among the extended antibiotic group. Future prospective studies should assess both the potential benefits and ARs associated with extended antibiotics among patients undergoing 2SE surgery.

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Figure 1. Kaplan-Meier survivorship curve illustrating the time to treatment failure among patients with polymicrobial PJIs. The shaded areas surrounding the gross line represent the 95% CI.

Figure 2. Kaplan-Meier survivorship curves illustrating the time to treatment failure among patients with polymicrobial PJIs, according to the infecting microorganisms.

Patients affected by S. epidermidis, E. faecalis, S. aureus, and anaerobes are represented with red, blue, green, and black lines, respectively.

Conclusion. Our study showed 61.53% of the patients with polymicrobial PJIs controlled the infection at 1-year follow-up. This rate decreased over the years. These patients required a considerable number of hospitalizations and surgeries. Likewise, presenting with fistulae and pain ensured a high suspicion of PJIs. S. epidermidis, E. faecalis, and S. aureus were the most frequent infecting microorganisms. The stratification of our cohort suggested the microbiology of polymicrobial PJIs could have driven differences in rates of treatment failure.

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237. Evaluating Epidural Abscess Outcomes in a County Hospital with Antibiotic Therapy Alone Compared to Antibiotics and Surgical Intervention

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Session: P-12. Bone and Joint

Background. Spinal epidural abscess (SEA) remains a rare suppurative infection which bacteria invade the epidural space through contiguous spread or hematogenous dissemination. Diabetes mellitus (DM), IV drug abuse (IVDA), alcohol abuse, degenerative joint disease (DJD) have been shown to confer risk for SEA. Antimicrobial therapy is critical, but literature remains less clear on surgical intervention. Primary aim for study was to evaluate outcomes with SEA when treated with antibiotics alone compared to antibiotics and surgical intervention at our county hospital.

Methods. A retrospective case series assessed patients 18 years or older at our county hospital with SEA consulted by infectious disease from 7/2009 to 7/2018. Data collected included demographics, social history (IVDA, alcohol abuse, homelessness), and microbiology results. Physician review of records determined if outcomes of SEA demonstrated improvement of symptoms compared to no improvement of symptoms.

Results. Of 37 patients, 15 patients were treated with antibiotics alone, 22 with antibiotics plus surgical spinal intervention. Of patients treated with antibiotics alone, 12/15 (80%) had improvement of symptoms and 3/15 (20%) had no improvement of symptoms. Those treated with antibiotics plus surgical intervention, 17/22 (77%) had improvement or resolution of symptoms and 5/22 (23%) had no improvement of symptoms. No statistically difference in outcome was observed between the two groups (p=0.835). The majority of cases were positive for Staphylococcus aureus (21/37, 57%). Methicillin-sensitive S. aureus (MSSA) comprised (12/21, 57%) and Methicillin-resistant S. aureus (MRSA) comprised (9/21, 43%).

Conclusion. Our retrospective study demonstrated no differences in outcome observed between patients treated with antibiotics alone compared to those with antibiotics plus surgical spinal intervention. Staphylococcus aureus was the most common organism. Management of patients with SEA currently remains individualized based on clinical condition, comorbidities and clinician judgment given limited literature. Proper sample collection for cultures and immediate intervention, either antibiotics only or antibiotics plus surgical interventions are crucial for better patient outcomes in SEA.

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238. Antimicrobial Activity of Dalbavancin against Gram-Positive Bacteria Isolated from Patients with Bone and Joint Infections from the United States (US) and Europe (2016-2020): Results from the International Dalbavancin Evaluation of Activity (IDEA) Program

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Session: P-12. Bone and Joint

Background. Bone and joint infections (BJI) comprise a series of disorders, including septic arthritis, osteomyelitis, and prosthetic joint infections. Dalbavancin (DALBA) is a lipoglycopeptide with a very long half-life that allows the treatment of serious infections with once weekly or biweekly administration. We evaluated the activity of DALBA against pathogens isolated from BJI.

Methods. A total of 798 organisms were collected from 62 US and 28 European (EU) hospitals in 2016-2020, including 503 S. aureus, 140 β-haemolytic streptococci (BHS), 71 coagulase-negative staphylococci (CoNS), 57 Enterococcus spp. (ES), 22 viridans group streptococci (VGS), and 5 S. pneumoniae. Bacteria were identified by standard algorithms and MALDI-TOF-MS. Susceptibility testing was performed by the reference broth microdilution method in a central laboratory.

Results. S. aureus (63.0%) was the most common pathogen associated with BJI, followed by BHS (17.5%). CoNS (8.9%), and ES (7.1%). All S. aureus isolates were susceptible (S) to DALBA (MIC<sub>₉₀ₐ₀</sub> 0.03/0.03 mg/L), linezolid (LNZ; MIC<sub>₉₀ₐ₀</sub> 1/2 mg/L), teicoplanin (TEI; MIC<sub>₉₀ₐ₀</sub> ≤0.5/1 mg/L), vancomycin (VAN; MIC<sub>₉₀ₐ₀</sub> 1/1 mg/L) and daptomycin (DAFTO; MIC<sub>₉₀ₐ₀</sub> ≤0.25/0.5 mg/L). DALBA was 8- to 16-fold less potent than DAFTO and 32- to 64-fold more potent than LNZ and VAN; and TEI against S. aureus. Oxacillin resistance (OXA-R) rates among S. aureus (MSSA rates) were 35.5% and 15.4% in the US and EU, respectively. Cefartoline (CPT) was active against 98.6% of S. aureus (MIC<sub>₉₀ₐ₀</sub> 0.25/1 mg/L) and 94.7% of MSSA (MIC<sub>₉₀ₐ₀</sub> 1/1 mg/L) isolates. Doxycycline and levofloxacin were active against 97.0% and 76.5% of S. aureus, respectively. Among CoNS, (54.9% OXA-R), DALBA (MIC<sub>₉₀ₐ₀</sub> 0.03/0.03 mg/L; highest MIC, 0.12 mg/L) was the most potent agent, followed by DAFTO (MIC<sub>₉₀ₐ₀</sub> 0.25/0.5 mg/L), CPT (MIC<sub>₉₀ₐ₀</sub> 0.25/0.5 mg/L) and LNZ (MIC<sub>₉₀ₐ₀</sub> 0.5/1 mg/L). The highest DALBA MIC value among BHS and VGS was 0.12 mg/L; MIC<sub>₉₀ₐ₀</sub> 0.03/0.03 mg/L for both groups. VAN was active against 82.4% of ESP and DALBA inhibited all VAN-S ESP at ≤0.06 mg/L.

Conclusion. DALBA demonstrated potent in vitro activity against common gram-positive organisms (CPO) causing BJI and appears to be a valuable option to treat BJI osteomyelitis caused by GP.