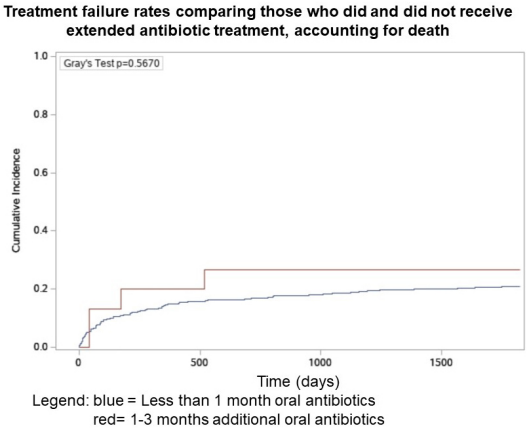

Conclusion. Few patients received extended oral antibiotics in the study period. There were no statistically significant differences in TF or ARs between the 2 groups. Yet, there was a trend toward higher rates of ARs among the extended antibiotic group. Future prospective studies should assess both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

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236. Insight of Polymicrobial Prosthetic Joint Infections at a Referral Hospital

Diana Fernández-Rodríguez, n/a[1];
María de Lourdes García-Hernández, Chemist[2];
Guillermo Cerón-González, Chemist[2];
Claudia Adriana Colín-Castro, Chemist[2]; Melissa Hernández-Durán, Chemist[2];
Mercedes Isabel Cervantes-Hernández, Chemist[2];
Luis Esaú López-Jácome, Chemist[2]; Noé Becerra-Lobato, Biologist[2];
Jaime Arturo Mondragón-Eguiluz, Infectious Diseases Specialist[2];
Edgar Samuel Vanegas-Rodríguez, Infectious Diseases Specialist[2];
Rafael Franco-Cendejas, Chief of Infectious Diseases Division[2]; [1]MD/PhD Plan de Estudios Combinados en Medicina (PECEM), Mexico City, Distrito Federal, Mexico; [2]Instituto Nacional de Rehabilitación "Luis Guillermo Ibarra Ibarra", Mexico City, Distrito Federal, Mexico

Session: P-12. Bone and Joint

Background. Approximately one-third of the prosthetic joint infections (PJIs) are polymicrobial. They are difficult to treat and there is an urgent need of clinical evidence that help to guide current protocols. We aimed to define the clinical characteristics and outcomes of patients with polymicrobial PJI.

Methods. We conducted a retrospective cohort study of patients with polymicrobial PJI treated at a referral hospital in Mexico City. Clinical data was retrieved and analyzed. Time to treatment failure, was evaluated for all cases.

Results. We identified 166 patients with a polymicrobial PJI from July 2011 to October 2020. The median follow-up period was 3.24 years (IQR, 1.45-6.42). Fistulae (77.7%) and pain (76.5%) were frequent. Patients required a median of 2 (IQR, 1-3) hospitalizations and 3 (IQR, 1-5) surgeries. Relapse, reinfection, and amputation ocurred in 21.1% (35), 10.2% (17), and 7.2% (12) of the cases, respectively. At 1-year follow-up 38.47% (63) patients failed to control the infection. At 2 and 5-year follow-up this rate increased to 50% (83) and 68% (112), respectively. The main infecting microorganisms were *Staphylococcus epidermidis* (51.8%), *Enterococcus faecalis* (47.6%), and *Staphyloccocus aureus* (34.9%). Anaerobes were identified in 38 (22.9%) cases. At 1 and 5-year follow-up, 39.31% (34) and 71.1% (61) of patients with *S. epidermidis* experienced treatment failure. On the other hand, those with *S. aureus* showed lower rates (log-rank p-value=0.03): 24.85% (14) and 50% (29), accordingly. Patients affected by anaerobes and *E. faecalis* exhibited similar trends, between them (log-rank p-value=0.73).

Table1. Clinical findings of patients with polymicrobial PJI.

Patients with polymicrobial PJI

	Total n=166
Sex, female	86 (52)
Age, median (IQR)	63 (46-73)
Abnormal weight	117 (70.5)
Overweight	49 (29.5)
Obese	68 (41.0)
ASA I/II	125 (75.3)
Affected joint	
Hip	106 (63.9)
Knee	52 (31.3)
Arthroplasty indication	
Osteoarthritis	89 (53.6)
Number of hospitalizations, median (IQR)	2 (1-3)
Number of surgeries, median (IQR)	3 (1-5)
PJI of the primary prosthesis	145 (87.3)
PJI presentation (≤1 month)	37 (22.3)
Fistulae	129 (77.7)
Pain	127 (76.5)
Fever	27 (16.3)
CRP (mg/dL), average ± SD	49.88 ± 53
ESR (mm/hr), average ± SD	32.18 ± 13.17
Leukocyte (x10³/μL), average ± SD	8.41 ± 3.64
Relapse	35 (21.1)
Reinfection	17 (10.2)
Suppressive antimicrobial therapy	11 (6.6)
Treatment failure	98 (59.0)
Limb amputation	12 (7.2)
Death	3 (1.8)
Out-patient treatment	98 (59.0)
Quinolone	82 (49.4)
Rifampin	57 (34.3)
SXT	39 (23.5)
Antituberculosis	5 (3.0)
Antifungal	6 (3.6)
S. epidermidis	86 (51.8)
E. faecalis	79 (47.6)
S. aureus	58 (34.9)
Anaerobes	38 (22.9)

Frequency distributions of sociodemographic factors, comorbidities, clinical presentation, outcomes, out-patient treatment, and etiology in patients with polymicrobial PJI. Data is presented as absolute frequency followed by relative frequency enclosed in parenthesis, otherwise specified. Abbreviations: SXT, Trimethoprim/Sulfamethoxazole.

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

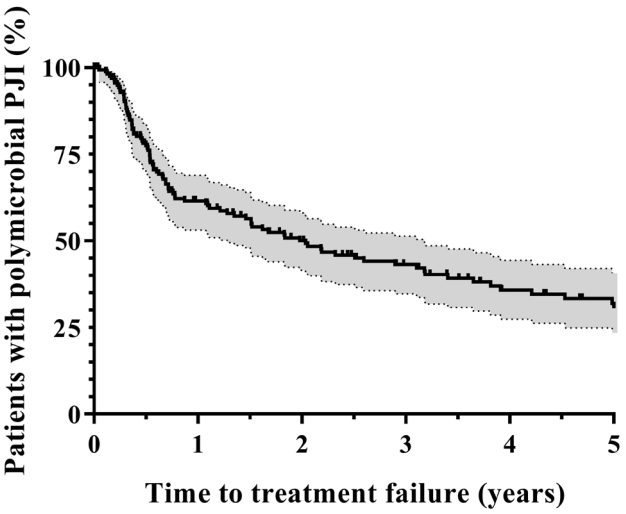
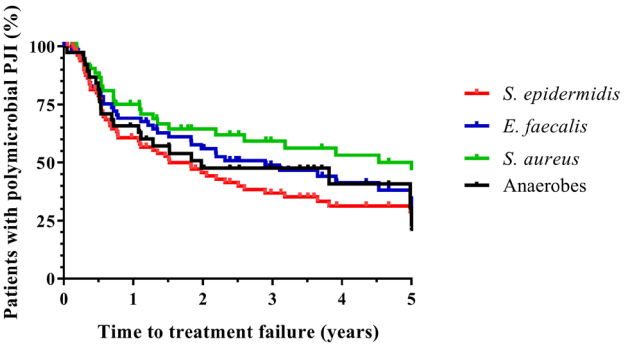


Figure2. Kaplan–Meier survivorship curves illustrating the time to treatment failure among patients with polymicrobial PJI, according to the infecting microorganisms..



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 PJI 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 PJI. *S. epidermidis, E. faecalis*, and *S. aureus* were the most frequent infecting microorganisms. The stratification of our cohort suggested the microbiology of polymicrobial PJI could have driven to differences in rates of treatment failure.

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

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

Moses Lee, DO[1]; Yazeed Kesbeh, MD[2]; Bruce Weng, DO[1]; Made Sutjita, MD, PhD[1]; [1]Riverside University Health System Medical Center, Moreno Valley, California; [2]University of California, Riverside, School of Medicine, Riverside, CA, Moreno Valley, California

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 evaluated 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, 56.7%). 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 judgement 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.

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

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

Helio S. Sader, MD, PhD, FIDSA[1]; Leonard R. Duncan, PhD[1]; Mariana Castanheira, PhD[1]; Mariana Castanheira, PhD[1]; Rodrigo E. Mendes, PhD[1]; [1]JMI Laboratories, North Liberty, Iowa

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. (ESP), 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 ESP (7.1%). All *S. aureus* isolates were susceptible (S) to DALBA ($MIC_{50/90}$, 0.03/0.03 mg/L), linezolid (LNZ; $MIC_{50/90}$, 1/2 mg/L), teicoplanin (TEI; $MIC_{50/90}$, ≤0.5/1 mg/L), vancomycin (VAN; $MIC_{50/90}$, 1/1 mg/L), and daptomycin (DAPTO; $MIC_{50/90}$, 0.25/0.0.5 mg/L. DALBA was 8- to 16-fold more potent than DAPTO and 32- to 64-fold more potent than LNZ, VAN, and TEI against *S. aureus*. Oxacillin resistance (OXA-R) rates among *S. aureus* (MRSA rates) were 35.5% and 15.4% in the US and EU, respectively. Ceftaroline (CPT) was active against 98.6% of *S. aureus* ($MIC_{50/90}$, 0.25/1 mg/L) and 94.7% of MRSA ($MIC_{50/90}$, 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 ($MIC_{50/90}$, 0.03/0.03 mg/L; highest MIC, 0.12 mg/L) was the most potent agent, followed by DAPTO ($MIC_{50/90}$, 0.25/0.5 mg/L), CPT ($MIC_{50/90}$, 0.25/0.5 mg/L) and LNZ ($MIC_{50/90}$, 0.5/1 mg/L). The highest DALBA MIC value among BHS and VGS was 0.12 mg/L (MIC_{90}, 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 (GP) causing BJI and appears to be a valuable option to treat BJI/osteomyelitis caused by GP.

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