

Conclusion. Patients de-escalated to oral therapy had fewer adverse events and similar incidences of treatment failure compared to patients maintained on parenteral vancomycin. Switching to oral therapy avoids some adverse events related to parenteral access. Our results in an uncontrolled, real-world setting are consistent with the OVIVA trial. Though limited by sample size, our data indicate switching to oral therapy in patients with an orthopedic infection improves safety outcomes without compromising effectiveness compared to continued parenteral vancomycin therapy.

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233. Osteomyelitis of the jaw: A retrospective analysis of clinical, microbiologic characteristics and antimicrobial treatment at a Tertiary Care Medical Center.

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Session: P-12. Bone and Joint

Background. Osteomyelitis of the jaw is a relatively rare entity in the post antibiotic era. The aim of this study is to describe clinical characteristics, microbiology and antibiotics use (oral vs intravenous) for treatment. We review 5 years of experience at Banner University Medical Center-Phoenix (BUMC-P) of proven cases of OM jaw by clinical, pathological, radiological criteria.

Methods. Retrospective study of cases. From January 2011 to November 2015, 157 cases of osteomyelitis of the jaw, we excluded cases of radiation therapy or neoplasia to the head and neck region, a history of antiresorptive medication use. A total of 34 patients with diagnosis of osteomyelitis of the jaw were reviewed. All patients met criteria for diagnosis of osteomyelitis and underwent surgical debridement and received antibiotics that included parenteral, orals and combined. We reviewed clinical, microbiology, antibiotic use. A successful outcome was defined as elimination of clinical symptoms, restoration of function and if available radiographic evidence of arrest and resolution of bony necrosis.

Results. This retrospective study involved 34 patients. Most common organisms were oropharyngeal flora 22 samples (65%); streptococcus anginosus group. 4 samples grew unusual gram negative bacteria. 10 (29%) samples grew fungal species. Antimicrobial regimen was divided in: intravenous (n=14) (41.2%), oral (n=7) (20.6%) and combination intravenous followed by orals as follows: 13 (38.2%). The average antibiotic duration was 8.1 + 4.7 weeks. We were able to follow up 30 patients, average follow up was 32.1-44.7 weeks. The overall success rate was (n=24) 80% with uneventful healing and (n=6) (20%) treatment failure. There was more failure in the oral antibiotics group (n=3).

Conclusion. This study is limited by small numbers. Surgery and cultures should guide treatment of osteomyelitis of the jaw. The use of oral antimicrobial therapy was associated to a higher likelihood of treatment failure. Although rarely linked as a cause of osteomyelitis, the authors think that the cultivation of candida spp should prompt appropriate coverage. More study is required to understand the efficacy of oral antimicrobial therapy in treating osteomyelitis of the jaw.

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234. Dalbavancin versus Outpatient Parenteral Antimicrobial Therapy with Vancomycin for Treatment of Bone and Joint Infections in a Veteran Population

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Background. Dalbavancin is a long-acting lipoglycopeptide with broad gram-positive activity. A long half-life makes it an attractive treatment option for bone and joint infections (BJI). Previous studies have demonstrated efficacy of dalbavancin in the treatment of BJI. Based on these studies, our institution established a protocol for using dalbavancin as an alternative to IV antibiotics via PICC line.

Methods. Chart review was performed to compare outcomes of patients who were treated with dalbavancin versus vancomycin for BJI from 8/2017 -7/2020. Patients that received two doses of dalbavancin for BJI were compared with patients who received OPAT with vancomycin during the same time period. Patients were excluded if they were bacteremic or received dalbavancin for another indication. Data was collected from the Veterans Health Administration's Corporate Data Warehouse and retrospective chart review. No statistical analyses were performed due to the descriptive nature of this study.

Results. A total of 59 patients were included; 25 received dalbavancin and 34 received vancomycin. Relevant differences in baseline characteristics included a higher proportion of patients with osteomyelitis (88% vs 74%) and refractory infection (64% vs 44%) in the dalbavancin group. More patients in the dalbavancin group (38% vs 24%) were readmitted for the same infection within one year, required (29% vs 21%) additional surgical intervention, and had increased CRPH on follow-up labs (32% vs 3%). Dalbavancin use likely expedited discharge in at least 5 cases where vancomycin levels were not therapeutic. No significant adverse effects due to dalbavancin were noted, aside from one patient with an increase in serum creatinine. In the vancomycin group, 8 patients changed antibiotics due to adverse effects or difficulty managing levels and 3 patients had ED visits for PICC line care.

Conclusion. Dalbavancin may be a safe PICC-sparing treatment for BJI, particularly in cases where compliance is of concern, or there are logistical or tolerability issues with vancomycin. Our findings do raise concern for worse outcomes with dalbavancin, but the small sample size, difference in baseline characteristics between groups and descriptive nature of the study preclude any conclusions from being drawn.

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235. Outcomes Associated with Extended Oral Antibiotic Prophylaxis After 2-Stage Exchange Surgery to Prevent Recurrent Prosthetic Joint Infection

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Background. 2-stage exchange (2SE) surgery is often used to treat chronic prosthetic joint infections (PJI). IDSA guidelines do not recommend oral antibiotic suppression after 2SE. However, a recent randomized trial suggested that oral antibiotics for 3 months after arthroplasty reimplantation may prevent recurrent PJI. Objective: To compare rates of treatment failure (i.e., recurrent PJI) and adverse reactions (ARs) among patients who received < 1 month of antibiotics directly after reimplantation to those who received 1-3 months of antibiotics following reimplantation (extended antibiotics).

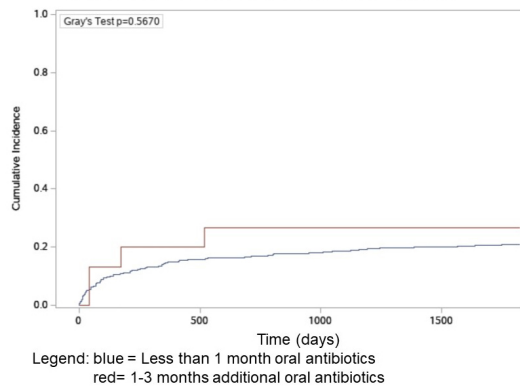
Methods. This retrospective cohort study included patients with hip, knee, or shoulder PJI who underwent 2SE at 83 VA hospitals between the years 2003-2017. PJI was defined using administrative codes and microbiology data. Patients were followed for 5 years to assess treatment failure (TF) and ARs. TF was defined as recurrent PJI, debridement, or reoperation. ARs included *Clostridioides difficile* infections (CDI), or antibiotic associated diarrhea (AAD) during or 72 hours after antibiotics. Chi-square tests were used to compare outcomes. Cumulative incidence function curves were created to compare TF rates between those who did and did not receive extended antibiotic treatment, incorporating the competing risks of TF and death.

Results. Of the 433 patients, most (97%) received < 1 month of oral antibiotics and 3% received extended antibiotics. The 15 patients who received extended antibiotics had similar rates of TF and ARs compared with patients who received < 1 month of oral antibiotics (Table). However, there was a trend toward higher rates of CDI (6.7% vs. 3.8%) and AAD (13.3% vs. 9.6%) among those who received extended antibiotics. There was no difference in TF comparing extended antibiotics with < 1 month of antibiotics, accounting for death (Figure).

Table: Treatment Failure and Adverse Reactions Among Those Who Did and Did Not Receive Extended Antibiotics

	< 1 Month Oral Antibiotics (n= 418)	1-3 Months Oral Antibiotics (n= 15)	p-value
Treatment Failure			
Reoperation	56 (13.4%)	3 (20.0%)	0.46
Late Debridement	47 (11.2%)	3 (20.0%)	0.30
Recurrent PJI	46 (11.0%)	2 (13.3%)	0.78
Adverse Reactions			
<i>C. difficile</i> Infection	16 (3.8%)	1 (6.7%)	0.58
Antibiotic Associated Diarrhea	40 (9.6%)	2 (13.3%)	0.63

Treatment failure rates comparing those who did and did not receive extended antibiotic treatment, accounting for death



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 TSE surgery.

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

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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 occurred 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 *Staphylococcus 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 III	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 (x10 ³ /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)
<i>S. epidermidis</i>	86 (51.8)
<i>E. faecalis</i>	79 (47.6)
<i>S. aureus</i>	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.