***Background.*** Bone cultures in diabetic foot infection is the most accurate method to identify causative pathogen, while there is only 30% concordance between superficial wound swab and bone biopsy cultures. Diabetic foot infection is commonly polymicrobial, therefore report on the bone biopsy culture may come with several updates before it is finalized. Our study is aimed to describe how often additional pathogens were identified after patients' discharge on antibiotics therapy for diabetic foot osteomyelitis, and evaluate microbiological appropriateness of antibiotic regimen upon discharge based on the final result of the bone culture.

***Methods.*** Medical records of the patients 18 years old or older, who had inpatient bone biopsy, deep tissue debridement or amputation for diabetic foot infection, were reviewed from January 2014 through Dec 2015 in Rochester Regional Health System. Antibiotic regimens for the patients discharged before final culture result were evaluated for microbiological appropriateness by two reviewers trained in infectious diseases.

***Results.*** In total, 198 procedures were screened, 158 procedures met inclusion criteria, out of which 74 patients with 80 procedures (51%) were discharged before the final culture result was available. Average time from procedure to the final culture report was 6 days, and from discharge to the final culture was 3.7 days. In most of the cases (70%, 56 out of 80) the patients were discharged on empiric regimen discordant with final culture result. Predominant organisms were Gram-positive bacteria 74%, with Gram negatives 24%, and yeast 2%. Most infections were polymicrobial (81%), mixed with anaerobic bacteria in 37%. The most frequent isolates were *Staphylococcus aureus* (15%), *Corynebacterium* (14%), anaerobic Gram-positive cocci (12%), and *Staphylococcus epidermidis* (8%). All negative Gram stains (31%, 25 out of 80) had positive growth on culture.

***Conclusion.*** Half of the patients with diabetic foot osteomyelitis, who underwent bone biopsy, were discharged before final culture results were available. Most of them were discharged on empiric regimen discordant with final culture. This data suggests that careful outpatient follow-up on the final culture would likely result in modification of antibiotics therapy to target newly reported pathogen.

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

### 210. Efficacy and Safety of Dalbavancin for the Treatment of Acute Bacterial Skin and Skin Structure Infection (ABSSSI) in Patients with Diabetes Mellitus

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**Session:** 45. Clinical: Bone and Joint Infection
*Thursday, October 5, 2017: 12:30 PM*

***Background.*** ABSSSIs are common in patients with diabetes and have an increased risk of complications. Dalbavancin is a long-acting lipoglycopeptide with potent activity against Gram-positive pathogens responsible for ABSSSI, including methicillin-resistant *Staphylococcus aureus* (MRSA), and has demonstrated activity in ABSSSI with single-dose administration. We assessed outcomes in patients with and without diabetes in a clinical trial evaluating the efficacy of dalbavancin for ABSSSI.

***Methods.*** In a double-blind, phase 3 trial, adult patients with ABSSSI involving deeper soft tissue or requiring significant surgical intervention, defined as major abscess, cellulitis, and traumatic wound/surgical site infection were randomized 1:1 to dalbavancin as a single-dose (1500 mg) or as a two-dose regimen (1000 mg on Day 1 and 500 mg on Day 8). The primary endpoint was ≥20% reduction in erythema at 48–72 hours; clinical success on Days 14 and 28 was defined as improvement in lesion size and signs and symptoms. *P*-values were obtained using Fisher's exact test for categorical variables and Wilcoxon rank-sum test for continuous variables. In a post-hoc subgroup analysis, outcomes were compared among the subgroups of participants with and without diabetes.

***Results.*** There were 76/698 (10.9%) participants with diabetes and 622/698 (89.1%) participants without diabetes. Participants with diabetes were more likely to be older or obese, and had higher rates of cellulitis, while participants without diabetes had higher rates of abscess (Figure 1). At Days 14 and 28, clinical success was achieved in ≥84% of participants with diabetes, and investigator assessment of cure was achieved in ≥95% of participants with diabetes (Figure 2). Drug-related adverse events were observed in 7 (9.2%) patients with and 44 (7.1%) participants without diabetes.

***Conclusion.*** Dalbavancin has similar rates of clinical response and success for the treatment of ABSSSI in patients with or without diabetes.

**Figure 1. Baseline Characteristics**

| Characteristic | With Diabetes (n=76) | Without Diabetes (n=622) | *P* value |
|---|---|---|---|
| Age, y, mean (SD) | 55.8 (13.4) | 47.2 (14.7) | <0.0001 |
| Male, n (%) | 39 (51.3) | 368 (59.2) | 0.22 |
| BMI, kg/m$^2$, mean (SD) | 35.5 (9.8) | 28.0 (6.6) | <0.0001 |
| Infection type, n (%) | | | 0.052 |
| Cellulitis | 44 (57.9) | 289 (46.5) | |
| Major abscess | 11 (14.5) | 164 (26.4) | |
| Traumatic wound/surgical site infection | 21 (27.6) | 169 (27.2) | |
| SIRS, n (%) | 35 (46.1) | 268 (43.1) | 0.63 |

BMI=body mass index; SIRS=systemic inflammatory response syndrome.

**Figure 2. Clinical Success**

| Characteristic | With Diabetes n/N (%) | Without Diabetes n/N (%) |
|---|---|---|
| **Intent-to-treat population** | | |
| Clinical response at 48–72 h | 58/76 (76.3) | 520/622 (83.6) |
| Difference (95% CI)* | −7.3 (−18.3, 1.5) | |
| **Clinically evaluable population** | | |
| Clinical success at end of treatment (Day 14) | 54/64 (84.4) | 483/540 (89.4) |
| Difference (95% CI)* | −5.1 (−16.1, 2.5) | |
| Clinical success at final visit (Day 28) | 51/57 (89.5) | 446/481 (92.7) |
| Difference (95% CI)* | −3.2 (−14.0, 3.0) | |
| Investigator assessment of cure at end of treatment (Day 14) | 61/64 (95.3) | 523/539 (97.0) |
| Difference (95% CI)* | −1.7 (−10.0, 1.9) | |
| Investigator assessment of cure at final visit (Day 28) | 55/57 (96.5) | 466/480 (97.1) |
| Difference (95% CI)* | −0.6 (−9.1, 2.7) | |

CE=clinically evaluable; ITT=intent-to-treat.
*Miettinen and Nurminen method.

***Disclosures.*** M. Nowak, Allergan plc: Employee, Salary. U. Rappo, Allergan plc: Employee and Shareholder, Salary. P. L. Gonzalez, Allergan plc: Employee and Shareholder, Salary. J. Chen, Allergan plc: Employee, Salary. J. S. McGregor, Allergan plc: Employee, Salary. J. Bryowsky, Allergan plc: Employee and Shareholder, Salary.

### 211. *Corynebacterium* Bone and Joint Infection (BJI): A Retrospective Cohort Study in a Reference Center for BJI Management

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**Session:** 45. Clinical: Bone and Joint Infection
*Thursday, October 5, 2017: 12:30 PM*

***Background.*** *Corynebacterium* is a rare etiologic agent of BJI. We aimed to describe this rare clinical condition and to assess treatment failure determinants.

***Methods.*** All adult patients with proven *Corynebacterium* BJI (i.e., consistent clinical/radiological signs, AND ≥2 reliable positive bacteriological samples, AND treated as such) were included in a retrospective cohort study. After cohort description, determinants of treatment failure (i.e., infection persistence, relapse, requirement of additional surgical procedure, and BJI-related death) were determined using stepwise logistic regression and Kaplan-–Meier curve analysis.

***Results.*** The 51 included BJI were more frequently chronic (88.2%), orthopaedic device related (ODI, 74.5%) and polymicrobial (78.4%). Surgery was performed in 92.2% of cases, and considered as appropriate in 76.5% of them. The main first-line antimicrobials were glycopeptides (68.6%), β-lactams (50%), and/or clindamycin (10.0%). Three (5.9%) patients received daptomycin as part of first-line regimen, and 8 (15.7%) at any point of treatment. After a follow-up of 60.7 (IQR 30.1–115.1) weeks, 20 (39.2%) treatment failures were observed, including 4 (20%) *Corynebacterium*-documented relapse. Independent risk factors were initial biological inflammatory syndrome (OR 16.1; $P$ = 0,030) and inappropriate surgical management (OR 7.481; $P$ = 0.036). Interestingly, all patients receiving daptomycin as part of first-line regimen failed ($P < 0.001$), including one patient with a *Corynebacterium*-documented relapse with a daptomycin increased MIC. Among patients with ODI, survival curve analysis disclosed a worst prognosis in case of prosthetic joint infection ($P$ = 0.030), unappropriate surgical management ($P$ = 0.029) and daptomycin use as first-line regimen ($P < 0.001$).

***Conclusion.*** *Corynebacterium* BJI is a poorly known condition, frequently chronic, and polymicrobial. An important rate of failure was observed, associated with inappropriate surgical management and daptomycin use as part of first-line regimen. As described for other clinical conditions such as infective endocarditis, daptomycin should be avoid or used in combination therapy to prevent resistance selection and treatment failure.

***Disclosures.*** **T. Ferry**, HERAEUS: Consultant, Speaker honorarium. **S. Lustig**, Heraeus: Consultant, Consulting fee

### 212. Microbiological Epidemiology Depending on Time to Occurrence of Prosthetic Joint Infection (PJI): Impact on the Empirical Antimicrobial Strategies

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