irradiation and intrabuccal exposure. We aimed to describe clinical and microbiological features, management and outcome of osteomyelitis following mandibular reconstruction with FFF.

Methods: Patients referred to our reference center for an osteomyelitis following FFF reconstruction of the mandible were included in a retrospective cohort. Microbiology was described based on gold-standard samples. Risk factors for treatment failure (infection persistence or relapse, need for additional surgery for septic reason, infection-related death) were assessed by logistic regression and Kaplan-Meier survival curve analysis.

Results: 31 patients (age, 60.5 [IQR, 52.4–66.6]; 30 males; 62.5%; modified Charlson comorbidity index, 4 [3–5]) were included. Indications for FFF mandible reconstruction were mostly carcinoma (n=27; 56.3%) and osteoradionecrosis (n=12; 25.0%), with 44 (82.9%) previous neck irradiation. FFF osteomyelitis were mostly early (<3 months post-surgery; n=43; 89.6%). Main symptoms were local inflammation (n=28; 59.6%), ununion or sinus tract (n=28; 59.6%), bone or device exposure (n=21; 44.7%), and were associated with radiological signs for infection in 33 (75.0%) cases. Microbiological documentation highlighted Enterobacteriaceae (n=25; 61.0%), Streptococcus spp. (n=22; 53.7%), S. aureus (n=10; 24.4%), anaerobes (n=10; 24.4%), Enterococcus spp. (n=9; 22.0%) and non-fermenting Gram negative bacilli (GNB; n=8; 19.5%). Thirty-nine (81.3%) required surgery, consisting in debridement with implant retention in 25 (64.1%) cases, associated with a 93 (64–128) day course of antibiotic therapy. After a follow-up of 18 (11–31) months, 24 (50.0%) treatment failure were observed. An early ID-specialist referral was the only significant predictor of favorable outcome (OR, 0.167; p=0.005). Non-fermenting GNB infections tended to be associated with a higher risk of failure (OR, 8.4; p=0.058).

Probability of treatment failure of osteomyelitis following FFF mandible reconstruction according to ID-referral (A), CRP level 2 weeks after surgery (B) and presence of non-fermenting GNB

Conclusion: Osteomyelitis following mandibular reconstruction with FFF represent difficult-to-treat infections. Our results advocate for a multidisciplinary management, including an early ID-specialist referral.

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191. oral versus Intravenous Antibiotic Treatment in Skin and Soft Tissue Infections as a Consequence of Intravenous Drug Use: A Retrospective Study to Demonstrate Noninferiority

Aryan M. Andrzejewski, MD; J. Alex Viehman, MD; University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania; University of Pittsburgh, Pittsburgh, Pennsylvania

Session: O-37. Skin, Soft Tissue, Bone & Joint Infections

Background: Skin and soft tissue infections (SSTIs) are among the most prevalent infectious complications of intravenous drug use (IVDU). Given its polymicrobial nature, studies focusing on SSTIs in the general population may not be generalizable this group. We completed a retrospective chart review to better characterize the safety and efficacy of oral versus intravenous (IV) antibiotics for the treatment SSTIs in IVDU.

Methods: We reviewed patients admitted with bacterial SSTIs and IVDU from January 01, 2012 to December 31, 2019 based on ICD-10 codes. SSTIs complicated by bacteremia, endocarditis, bone or joint involvement on index admission were excluded. Patients who received < 48 hours of IV antibiotics were considered oral therapy, otherwise they were considered IV therapy. Patient comorbidities, incision and drainage (I&D) status, substance use, microbiota and ICD-10 codes were reviewed.

Results: Of 231 eligible patients, 84 received oral therapy. There was no statistical difference in patient characteristics between the two therapy groups. Streptococcus anginosus group were the most common organisms found (33%) followed by S. aureus (31%). There was no statistical difference in death rates of re-admission (p=0.87), recurrent primary site infection (p=1.00), repeat debridement (p=0.08) or occurrence of deep-seated infections within 90 days of treatment completion. No mortality was observed. The oral group had shorter length of stay (3 vs 5 days, p < 0.05) and shorter total duration of antibiotics (10 vs 13 days, p < 0.001). Overall, 90% of those with abscess underwent I&D, which did not differ between therapy groups. Time to I&D was shorter (0 vs. 1 day, p=0.005) in the oral group. Patients who did not receive I&D were more likely to be readmitted within 90 days (p=0.025).

Conclusion: In SSTIs related to IVDU, oral antibiotic therapy was noninferior to IV in terms of mortality, readmission, and deep-seated infection rates within 90 days of treatment completion and had a decreased length of stay and total treatment duration. A delay in I&D led to increased length of stay and lack of I&D increased readmission rate. Therefore, a prompt I&D may allow a safe and effective early transition to oral therapy in SSTIs related to IVDU.

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192. The Use of Area Under the Curve to Determine Therapeutic Vancomycin Dosing in Skin and Soft Tissue Infections

Lauren Dea, PharmD1; Scott T. Johns, PharmD2; Ariel Ma, PharmD3; VA San Diego, La Jolla, California; San Diego VA Healthcare System, San Diego, California; VA San Diego Medical Center, san diego, california

Session: O-37. Skin, Soft Tissue, Bone & Joint Infections

Background: The vancomycin AUC/MIC target ratio of 400 to 600 mg·h/L, that is recommended (level Ia+) in the 2020 IDSA/ASHP vancomycin TDM guidelines is appropriate for patients with complicated MRSA infections; using lower targets for less complicated infections may reduce the risk for nephrotoxicity without compromising efficacy. The current methodology surrounding vancomycin AUC/MIC targets is refined, with no source specific targets identified, especially for relatively lower risk MRSA infections such as skin and soft tissue infections (SSTIs).

Methods: This was a retrospective observational study of hospitalized patients at the Veterans Affairs Healthcare System in San Diego, CA with a SSTI and prescribed intravenous vancomycin between January 1, 2016 and December 31, 2019. Patients included were adults, 18 years of age and older, treated with IV vancomycin with ≥1 measured concentration for at least one of the ICD-10 CM codes for SSTI. Patients were excluded if they had any of the following SSTIs: (1) osteomyelitis; (2) infection related to chronic ulcers or wounds; (3) head SSTI; (4) peri-rectal SSTI; (5) human or animal bite SSTI; (6) SSTI related to retained foreign body; (7) necrotizing SSTI; (8) surgical site infection. Patients were also excluded if they were undergoing dialysis or had severe immuno suppression.

Results: A total of 722 patients on vancomycin for a SSTI were identified from the database query for screening, and 243 (34%) met inclusion criteria for the study. Classification and Regression Tree (CART) modeling identified a calculated AUC of ≥253 as having the highest correlation with clinical success. Clinical cure was significantly different between the AUC ≤253 (6/9 [67%]) and AUC >253 (214/234 [91%]) cohorts (p=0.043). There were no differences in hospital length of stay or duration of vancomycin therapy. Nephrotoxicity occurred in seven patients, all of who had AUC >253.

Conclusion: Overall treatment success in patients with SSTIs was associated with a vancomycin AUC >253, which is lower than the guideline recommended range of 400–600. Identification of vancomycin AUC targets for other low risk sources of infection, such as UTIs, is needed to prevent vancomycin overexposure.

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193. quality Improvement Initiative for Non-purulent Cellulitis Management in Urgent care setting: provider-level Performance Feedback

Laya Reddy, MD1; Miguel Goicoechea, MD1; Thomas Kozak, MD2; Samantha Bagcis, PhD, MSE1; Scripps Health, San Diego, California; Scripps Green Hospital, San Diego, California

Session: O-37. Skin, Soft Tissue, Bone & Joint Infections

Background: Methicillin-resistant Staphylococcus aureus (MRSA) has emerged as a common cause of skin and soft-tissue infections (SSTIs). This has resulted in an 88% increase in MRSA-directed antibiotic use in emergency departments. However, the majority of cellutitis presents as non-purulent due to Group A streptococci. An unintended consequence is that many with non-purulent cellulitis receive sub-optimal antibiotics and unnecessary diagnostics. Clinical guidelines at our institution recommend beta-lactam antibiotics and discourage empiric MRSA coverage for non-purulent cellulitis. The aim of this study is to use an audit-feedback intervention to optimize urgent care providers management of mild/moderate non-purulent cellulitis.

Methods: We identified all consecutive patients presenting to our urgent care with a purulent or lower extremity non-purulent cellulitis using ICD coding. We created a prospective pre and post-intervention study from 10/2018-3/2019 and 11/2019-4/2020 respectively. Intervention included review of practice guidelines with providers and feedback