Background. Native joint septic arthritis (NJSA) is commonly caused by Gram-positive organisms. Gram-negative NJSA is uncommon, and discussion is usually limited to gonococcal arthritis despite NJSA due to enterobacteriaceae being more prevalent. We aimed to describe the clinical features, treatment, and outcomes of enterobacteriaceae NJSA (ENJSA).

Methods. Cases were obtained from a previously described retrospective cohort of adult NJSA admitted to Middlemore Hospital, Auckland, and New Zealand between January 1, 2009 and December 31, 2014. ENJSA episodes were compared with non-Enterobacteriaceae NJSA (NENJSA).

Results. From 543 NJSA episodes identified, ENJSA were the most frequent (42%), followed by Staphylococcus (22%), followed by Enterobacter cloacae (8%). Small joint infection was less common in ENJSA (19%, 7/36) than NENJSA (8%, 42/507), was more common in ENJSA (53%, 19/36) than NENJSA (23%, 116/507), was more common in ENJSA (53%, 19/36) than NENJSA (23%, 116/507), was more common in ENJSA (53%, 19/36) than NENJSA (23%, 116/507), was more common in ENJSA (53%, 19/36) than NENJSA (23%, 116/507), was more common in ENJSA (53%, 19/36) than NENJSA (23%, 116/507) was more common in ENJSA (53%, 19/36) than NENJSA (23%, 116/507). Immune compromise was more prevalent in ENJSA (23.2 vs. 12.8 days) and longer mean length of stay. The optimal management strategy to improve ENJSA outcomes is unknown, but may include more aggressive treatment, failure to achieve cure after the designated treatment course (n = 2). There have been no cases of cytophenias, peripheral or optic neuropathy.

Conclusion. ENJSA warrants a well-tolerated oral antibiotic for the treatment of bone and joint infections for 4 weeks or greater. Clinical failure rates appear roughly similar to that of other oral options. Further study of tedizolid for BJs is warranted.

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1.00 (0.98–1.00). PJI codes alone had a sensitivity of 1.00 (0.86–1.00) and specificity 0.50 (0.23–0.77).

Conclusion. The combination of a revision operation procedure code and a PJI diagnosis code is sensitive and specific for the detection of a PJI in administrative databases. This is a promising avenue for national PJI surveillance and has the potential to facilitate future research in the prevention and management of PJIs.

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309. The Infected Spacer: The Impact of Spacer Exchanges and Debridements on Two-Stage Exchange Arthroplasty Outcomes

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Background. Prosthetic joint infection (PJI) is a grave complication of total joint arthroplasty (TJA). Data on patients who require further surgery for infection between explantation and reimplantation (i.e., while the spacer is in place) are limited. We investigated the effect of spacer exchange or irrigation and debridement (I&D) on clinical outcomes in patients undergoing two-stage exchange for PJI.

Methods. A retrospective cohort of hip and knee PJI treated with two-stage exchange was identified by query of hospital coding records from 2009 to 2014, with subsequent chart review. All cases met Musculoskeletal Infection Society International Consensus criteria for PJI. The primary endpoint was defined as prosthesis retention for 2 years from reimplantation. Spacer intervention was defined as undergoing a spacer exchange or I&D for infection purposes prior to reimplantation. Descriptive statistics were completed using the Fisher’s exact test for categorical variables and the Mann–Whitney U test for continuous variables.

Results. Three hundred patients undergoing two-stage exchange for TJA PJI were identified (141 hips and 159 knees). The average age was 66 years and 42% were female. Forty-two patients (14%) underwent spacer intervention, 22 knees (14%), and 20 hips (14%). 34 of these underwent spacer exchange. Of the 42 patients with spacer intervention, 28 (67%) met the primary endpoint. In univariate analysis, there was an association between spacer intervention and outcome (P = 0.02). Comorbidities and intervention (P = 0.02).

Conclusion. We present 2-year outcomes on a large cohort of TJA PJI treated with two-stage exchange arthroplasty. Patients requiring spacer exchange or I&D after TJA explantation have worse outcomes than their counterparts who do not. Because patients who fail two-stage arthroplasties often proceed to arthrodesis or amputation, our findings may help guide clinical decision-making prior to reimplantation.

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310. Assessment of MSIS Diagnostic Criteria as Predictors of Treatment Success in Total Knee Arthroplasty (TKA) Infections Treated With Two-Stage Exchange

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Background. Prosthetic joint infection (PJI) is a grave complication of total knee arthroplasty (TKA); predicting outcome is difficult. Musculoskeletal Infection Society (MSIS) criteria are sensitive and specific for the diagnosis of PJI. In prior work, we systematically studied the value of each MSIS criterion as a prognostic marker among a large cohort of patients with infected hip and knee arthroplasty treated with debridement, antibiotics, and implant retention (DAIR) at our specialized orthopedic hospital. We found that sinus tract drainage and culture positivity predicted explantation within two years of DAIR; the minor MSIS criteria were not predictive. Here, we sought to evaluate the utility of MSIS criteria in predicting outcomes of infected TKR PJI treated with two-stage exchange arthroplasty. We sought to evaluate whether MSIS criteria can predict the outcome of infected TKR PJI treated with two-stage exchange arthroplasty.

Methods. A retrospective cohort of TKA PJI treated with two-stage exchange was identified by query of hospital coding records from 2009 to 2014, with subsequent chart review. Collected data included demographics and comorbidities, duration of symptoms, implant age, and pathogen. All cases met Musculoskeletal Infection Society International Consensus criteria for PJI. The primary endpoint was defined as prosthesis retention for 2 years from reimplantation. Descriptive statistics were completed using the Fisher’s exact test for categorical variables and the Mann–Whitney U test for continuous variables.