vertebral osteomyelitis due to Candida is still rare and can be difficult to diagnosis and treat. We evaluated the incidence of vertebral osteomyelitis due to Candida species at our facility to try to identify risk factors and determine outcomes.

Methods. We used our electronic record databases to search for patients with a diagnosis of osteomyelitis, and a positive fungal culture. From 2006 to 2018 our hospital treated 103 cases of proven Candida vertebral osteomyelitis.

Results. Candida albicans was the most frequently isolated organism, being cultured in 10/14 (71.4%) patients, followed by C. tropicalis (2/14), C. krusei (1/14), and C. parapsilosis (1/14). The two most common risk factors for infection were injection drug use and tobacco use (100%). All patients were treated with caspofungin followed by fluconazole. Ten patients (71.4%) required surgery. Short-term outcomes were favorable with no deaths.

Conclusion. The incidence of vertebral osteomyelitis due to Candida may be increasing. In our state, injection drug use seems to be a factor in the increase of infection. We have seen a rise in injection drug use as prescription narcotics are becoming more difficult to obtain. Physicians must have a high index of suspicion for fungal disease when treating osteomyelitis in patients with these risk factors. Short-term outcomes seem favorable, but further studies are needed to evaluate long-term outcomes and to determine optimal management.

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301. The Use of Multiplex Touchdown PCR to Genotype Catibacterium (Propionibacterium) acnes Isolated from Periprosthetic Shoulder Infections

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Background. As biomeographic surveys of the human skin microbiome have shown that C. acnes is a major component of the residential axillary microbiota, the organism is frequently isolated from synovial tissue and joint aspirates obtained from patients with suspected periprosthetic shoulder infections. We hypothesized that multilocus sequence typing (MLST) applying a priori validated rapid high through-put multiplex PCR protocol would provide further insights into clonogrup associated with periprosthetic infections compared with commensal strains.

Methods. C. acnes collected between 2015 and 2017 were correlated with the presence or absence of infection in a detailed retrospective chart review. To determine the C. acnes phylogroup composition of bone and joint aspirates, we used a multiplex touchdown template PCR as a template in a six locus multiplex touchdown PCR assay using organism-specific primers targeting six genes (16s rRNA, ATPase, sdaA, Fic toxin, aspD and recA). Isolates were classified as a contaminant in the absence of multiple positive cultures from an anatomic site and without corresponding clinical, laboratory and histopathologic correlates of infection. The assignation of a diagnosis of prosthetic joint infection (PJI) conformed to the definition recommended by the IDSA Clinical Practice Guidelines of PJI.

Results. Of the C. acnes recovered from 94 patients, 14 (14.4%) were from patients with a definite or likely PJI and 80 (85.6%) were from patients with a probable or possible PJI. Of these, 76 (95%) were obtained from the joint aspiration, and the remaining 8 (9.4%) were isolated from a variety of tissue and fluid samples of which the majority (65.5%) were deemed as contaminants. Overall, phylogroups IAI, IB, and II predominated (79.8%). Although a similar genetic profile was present in all of the shoulder isolates, no phylogroup association was detected with PJI (P = 0.72). No genetic difference was present in the lineage of strains not causing PJI compared with those responsible for PJI (P < 0.25).

Conclusion. Our results mirror those from a previous investigation using a less robust four gene MLST PCR based scheme that showed a lack of phylogenetic association with shoulder PJI. Our results revealed phylogroup composition of the circulating C. acnes sequence types in our community.

Disclosure. All authors: No reported disclosures.

302. Role of Inflammatory Markers in Diagnosing Diabetic Foot Infection: A Meta-Analysis

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Background. Diabetic foot ulcers (DFUs) cause significant morbidity and put great economic burden on patient and healthcare facilities. Infection is the main driving force behind admissions related to DFU. Culture of soft tissue or bone is invaluable in diagnosing infection but is time consuming. Inflammatory markers such as erythrocyte sedimentation rate (ESR), C-reactive protein (CRP), and procalcitonin (PCT) are rapid, simple, and inexpensive laboratory tests that can aid in early diagnosis of diabetic foot infection (DFI) and monitor response to treatment. We did a meta-analysis to compare the diagnostic performance of inflammatory markers for detecting DFI.

Methods. We searched PubMed, Embase, and Cochran databases from their inception to December 2017. This meta-analysis was performed according to PRISMA guidelines. We included studies based following inclusion criteria: (1) at least one of the inflammatory markers (ESR, CRP, PCT) was evaluated; (2) baseline inflammation levels were measured as outcomes; and (3) sufficient data were available to construct 2 x 2 contingency table. We used bivariate random effect regression model to pool the sensitivity and specificity of the targeted biomarkers.

Results. We included 73 studies. Twelve studies met our inclusion criteria. Number of studies reporting data on each individual biomarker was as follows: 11 for ESR, seven for CRP, and five for PCT. Pooled sensitivity and specificity for ESR were calculated to be 0.84 (95% CI 0.76–0.89) and 0.89 (95% CI 0.73–0.98) with area under receiver operating characteristic curve (AUCROC) of 0.90 (95% CI 0.87–0.92). Pooled