1424. Association Between Erythrocyte Sedimentation Rate (ESR) Change and Treatment Failure in Patients with Osteomyelitis

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Background. Erythrocyte sedimentation rate (ESR) is monitored during therapy for osteomyelitis (OM) but the degree of reduction associated with treatment success remains unclear.

Methods. This retrospective cohort study evaluated patients treated for at least 2 weeks with intravenous (IV) antibiotics for OM through the VA St. Louis HCS from 1 January 2010 to 1 January 2018 with at least 2 ESR values during their therapy. Patients were excluded if they had comorbidities that could cause elevations in ESR. The primary outcome was the degree of reduction in ESR after the initial (pre-treatment) baseline. ESR was measured prior to the start of therapy, at the end of therapy, and 4 weeks post therapy. The degree of change in ESR was categorized as a less than 50% decrease, a 50% decrease, and a greater than 50% decrease, and was compared to treatment success.

Results. A total of 143 patients were included; 74 patients with a ≥50% decrease in ESR and 69 patients with a decrease <50%. Mean initial ESRs were not different between groups (79±5 vs. 79.9±32 mm/hour, P = 0.95), but end-of-treatment values were significantly higher in the <50% reduction group vs. ≥50% (20.6±14 vs. 7.2±42 mm/hour, P = 0.05, respectively). There were no baseline differences between groups in regards to age, sex, race, type of diabetes, PVD, GC > 50 mL/mm² initial surgical therapy management, or definitive or empiric therapy. Thirty percent (22/74) of patients with a ≥50% reduction in ESR failed treatment vs. 55% (38/69) in patients with a <50% reduction (P = 0.01). Only ESR reduction of ≥50% met criteria for inclusion in the multivariate regression model and was associated with a 65.5% relative risk reduction in treatment failure (OR 0.345; 95% CI 0.173–0.687; P = 0.002).

Conclusion. Achieving an ESR reduction of ≥50% from baseline during treatment for OM is independently associated with a significant reduction in risk of treatment failure.

Disclosures. All authors: No reported disclosures.

1425. Treatment Outcomes in Patients with Pyogenic Vertebral Osteomyelitis Who Have Cirrhosis

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Background. The mortality in liver cirrhosis was reported to be greater than that in the five major cancers. Infection further increases the mortality of patients with cirrhosis by four fold. Considering the greatly increased mortality from infection in patients with cirrhosis, early diagnosis and prompt treatments should be compulsory to save patients’ lives. However, adherence to such basic principle for patients with cirrhosis is not easy for clinicians engaged in the treatment of pyogenic vertebral osteomyelitis (PVO). Therefore, the mortality rate is expected to be high. However, no reports have described the mortality rate in this patient group.

Methods. A retrospective study was conducted to investigate the treatment outcome in PVO patients with cirrhosis. The baseline characteristics, infection profile, and treatment outcomes for OM were independently associated with a significant reduction in risk of treatment failure.

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1426. Outcomes of Additional Instrumentation in Elderly Patients with Pyogenic Vertebral Osteomyelitis and Previous Spinal Instrumentation

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Background. In patients with pyogenic vertebral osteomyelitis (PVO) and previous instrumentation requiring surgical treatment, a decision must be made between a less invasive non-instrumented surgery, including retaining the previous instrumentation, or a more invasive additional instrumented surgery involving the complete removal of the infected tissue and firm re-stabilization.

Methods. A retrospective cohort study (case–control study) was planned to evaluate the clinical outcomes of using additional instrumentation in patients with PVO and previous instrumentation. Patients were divided into two groups (instrumented or non-instrumented) according to the presence or absence of additional instrumentation. The baseline characteristics, infection profile, and treatment outcomes were compared between the two groups, and a multivariate logistic regression analysis was performed to identify the risk factors for infection recurrence.

Disclosures. All authors: No reported disclosures.
who experienced infection recurrence had worse clinical outcomes than those of the non-instrumented patients with PVO (Table 2). Severe medical comorbidities, the presence of a psoas abscess (Figures 1 and 2), and methicillin-resistant Staphylococcus aureus infection were associated with a higher risk of infection recurrence.

Conclusion. Surgery for additional instrumentation in patients with PVO and previous instrumentation showed similar rates of infection recurrence and mortality to those who underwent non-instrumented surgery despite a larger number of involved vertebral levels and an increased frequency of epidural abscesses.

Surgery for additional instrumentation in patients with PVO and previous instrumentation showed similar rates of infection recurrence and mortality to those who underwent non-instrumented surgery despite a larger number of involved vertebral levels and an increased frequency of epidural abscesses.

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