ABSTRACT# 42

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Title: C-Reactive Protein on Admission Predicts Length of Hospital Stay in Children with Osteomyelitis
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Background: CRP has previously been shown to be a useful marker in osteomyelitis for assessing when to transition from parenteral to oral therapy. It has also been shown to correlate with length of stay (LOS) and severity of infection for other infectious etiologies, including pneumonia and COVID-19.

Methods: This study was performed as a retrospective review of all patients admitted with osteomyelitis over a one-year period. Initial and subsequent inflammatory biomarkers were recorded. A correlation analysis was performed between these inflammatory markers and hospital LOS.

Results: A total of 38 admissions with uncomplicated osteomyelitis were included in this study. The average LOS was 7.9 days (range 1 – 56). The average CRP was 53.1 (0.2 – >300), Erythrocyte Sedimentation Rate (ESR) was 42.1 (8 – 90), WBC was 10.1 (3.4 – 17.8). Inflammatory markers were correlated to LOS. Analysis showed no correlation between WBC and LOS, but did show a statistically significant correlation between CRP and LOS (Spearman’s rank correlation coefficient 0.454, p 0.003), as well as ESR and LOS (Spearman’s rank correlation coefficient 0.354, p 0.029).

Conclusions: CRP and ESR are markers of inflammation, and have previously been shown to correlate with LOS in other infectious processes. Here, we have shown that a lower initial CRP in a patient presenting with osteomyelitis was associated with shorter hospital stay and more rapid improvement. These findings support the use of CRP as a marker for the severity and complication of osteomyelitis.

Word Count: 236