

Assessing the Effectiveness of a Three-Day Azithromycin Stop Policy in Uncomplicated Community-Acquired Pneumonia

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Abstract:

Azithromycin has been one of the most prescribed antibiotics to outpatients in the last few decades, though a consequence is the ever-increasing macrolide resistance. Limiting the duration of use in community-acquired pneumonia and chronic obstructive pulmonary disease has been studied before, but with little evidence. This study aims to tackle the difference between limiting duration of therapy of azithromycin, balanced by its long half-life of 72 hours, versus the supposed effect on resistance and length of stay, among other parameters. In this retrospective quality-improvement project, two groups consisting of 30 subjects each were compared against each other: pre- and post-implementation of a three-day azithromycin stop policy. Measured and assessed were the average duration of therapy and average cumulative dose within each group, as well as length of stay and readmission. The mean days of therapy in the pre- and post-implementation group were 4.1 ± 1.5 days and 3.1 ± 0.4 , respectively [$p < 0.001$ ($\alpha = 0.05$)]. There was a 37% increase in appropriate prescribing following implementation of the stop policy [$p < 0.002$ ($\alpha = 0.05$ to 0.01 ; 1 d.f.)]. The results of this study showed a statistically significant reduction in mean days of therapy for patients receiving azithromycin before a stop policy has been put in place. After implementation of a stop policy, a significant increase in appropriateness was observed. Further results and interpretation of length of stay and readmission should provide even greater insight into how the azithromycin stop policy has affected the two hospitals. There could have been several theoretical improvements to

the study design, but nonetheless provided valuable feedback to hospital systems and their patients.

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