Hospital Admission Patterns in Adult Patients with Community-acquired Bacterial Pneumonia Who Received Ceftriaxone and a Macrolide by Pneumonia Severity Index Score

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BACKGROUND

Even in the disparity in cost between inpatient and outpatient care, the Infectious Diseases Society of America/Thoracic Society (IDSA/ATS) community-acquired pneumonia (CAP) guidelines recommend use of site-of-care severity of illness to identify CAP patients who may be candidates for outpatient treatment. Despite this Level 1 recommendation, there are limited data on US hospital community-acquired bacterial pneumonia (CABP) admission patterns stratified by Pneumonia Severity Index (PSI) score and presence of comorbidities. This study describes hospitalization and length of stay (LOS) patterns among adult patients who received ceftriaxone (CTX) and clarithromycin (M) at admission in the Vizient® (MedAssets, Irving, TX, USA) database.

METHODS

A retrospective study of patients hospitalized for CABP and in the Vizient database from July 2012 to June 2015 was performed. Inclusion criteria: (1) age ≥18 years; (2) a primary diagnosis for CABP; (3) received CTX and/or M on hospitalization Day 1 or 2; and (3) ≥1-year enrollment before the study period. The study period, only the first episode was considered. Determining PSI risk class–CCI score category is in the Supplementary Methods Section. Baseline characteristics and associated hospital LOS among “low risk” patients (PSI score ≤90) or patients with short admission were evaluated.

RESULTS

During the study period, 32,917 patients met inclusion criteria. Among hospitalized CABP patients, 23.5% had a PSI score ≤70 and 33.7% had a PSI score between 71–90. The mean LOS for patients with a PSI score ≤70 and 71–90 ranged between 4.9-6.2 days, depending on CCI score. The 30-day mortality rates and PSI-related hospital readmission rates were tabulated across PSI risk class–CCI score categories.

CONCLUSIONS

• Over two-thirds of hospitalized CAP patients who received CTX in M on Day 1 or had PSI scores ≤70 – This meets the low-risk criteria (class ≤18) for which outpatient treatment is advocated.

• On average, hospital LOS was 5-6 days for patients who had PSI scores ≤70.

• Collectively, these findings suggest that clinicians may potentially use this information when deciding about the appropriate site of care for patients who received CTX in M in hospitalization Day 1 or 2.

• These study findings also underscore the potential need to identify approaches and antimicrobial therapies that can facilitate the care of outpatient treatment in patients who can have a low risk of mortality, which can potentially avoid costs included in hospital LOS.

• As with all studies of this nature, the findings need to be validated or confirmed in the clinical area.

It will be important to confirm that the admission patterns by PSI category reported in this study are consistent when using medical data to calculate PSI score.

REFERENCES


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