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Empiric Antibiotic Use in Older Adults with Community-Acquired Pneumonia: Guideline Adherence, Appropriateness of Therapy, and Clinical Outcomes at a Tertiary Hospital in the Philippines

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Background

Pneumonia remains a leading cause of hospitalization and death among older adults, with approximately 3 million deaths annually worldwide. In the Philippines, CAP guidelines are generalized for adults and lack age-specific recommendations, leading clinicians to often use broader-spectrum antibiotics. Local data on pathogen profiles and resistance patterns in older patients are limited.

Objectives

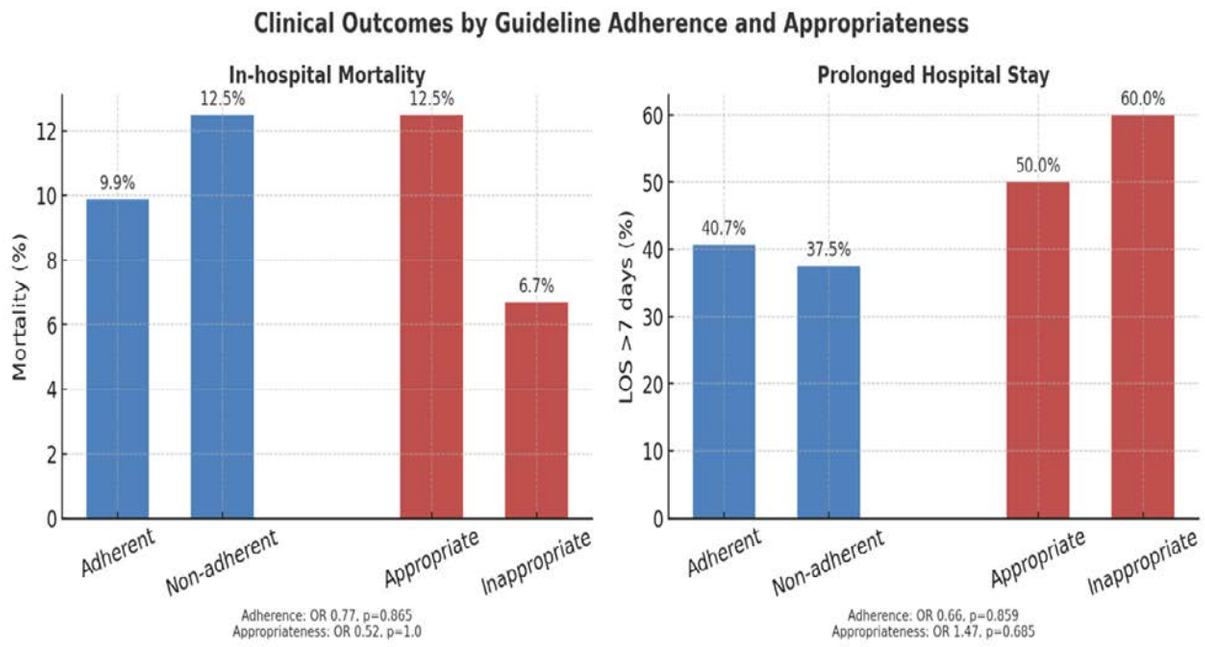
To determine the association between physician adherence to the *2020 Philippine Clinical Practice Guidelines for the Management and Prevention of Adult Community-Acquired Pneumonia* and clinical outcomes among older adults (aged ≥60 years) hospitalized with community-acquired pneumonia at De Los Santos Medical Center from January to December 2023.

Methods

A retrospective cohort study was conducted involving 129 patients aged ≥60 years who were admitted with moderate- to high-risk community-acquired pneumonia (CAP) in 2023 at a tertiary hospital. Clinical, microbiologic, and treatment data were collected from medical records. Outcomes were analyzed based on adherence to the 2020 Philippine CAP guidelines and culture-based appropriateness of empiric antibiotic therapy. Statistical analysis was performed using Fisher's exact test and logistic regression, with significance set at $p<0.05$.

Results

Of the 129 patients, 71% received guideline-adherent empiric antibiotics. In the non-adherent group, 68% received broader-spectrum agents with anti-Pseudomonal coverage. There were no significant differences in in-hospital mortality (9.9% vs 12.5%) or prolonged hospital stay (>7 days: 40.7% vs 37.5%) between adherent and non-adherent groups (P > 0.05). Among 22 patients (17%) with positive cultures, only 31.8% received appropriate antibiotics based on susceptibility results. Predominant pathogens were Klebsiella pneumoniae, and Escherichia coli. Culture-based appropriateness was not associated with better outcomes.



Conclusion

Guideline-adherent empiric therapy was not inferior to broader-spectrum regimens in terms of mortality or hospital stay. These findings support the use of guideline-recommended antibiotics in older adults with CAP. The low diagnostic yield of cultures highlights the need for improved microbiological testing.

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