

عنوان مقاله:

Association of Vitamin D Status with the Severity and Mortality of Community-Acquired Pneumonia in Iran during 2016-2017: A Prospective Cohort Study

محل انتشار:

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خلاصه مقاله:

Background: Community-acquired pneumonia (CAP) is a common disease considered as a major public health problem. It causes considerable morbidity and mortality despite antibiotic treatments. Hospital admission of CAP patients is a significant financial burden and many efforts are ongoing to decrease hospital stay durations. Vitamin D deficiency is associated with increased risk of respiratory infections. This study was designed to determine the association of vitamin D status with hospitalized CAP patient mortality and disease severity. Methods: This prospective cohort study examined 180 CAP patients admitted to a teaching Hospital in Tehran, Iran during 2016-2017. Their demographic and anthropometric characteristics were recorded. The disease severity was evaluated based on CURB-65. Vitamin D status was determined by measuring by serum 25-hydroxylated vitamin D (25(OH)D) with ELISA. The patients were followed for 30 days to evaluate their vitality. Results: One hundred and eighty pneumonia patients, including 104 males and 84 females, were recruited from respiratory disease, infectious disease, emergency, and ICU wards. Nearly 18% of the patients were current smokers. The CAP severity, evaluated by CURB-65, was determined to be non-severe in 74.4% of the patients. Patients were classified as vitamin D sufficient, insufficient, or deficient. Thirty percent of the patients were vitamin D sufficient, 18% were insufficient, and 52% were deficient. Thirty-day mortality was 40% (72 cases). Mortality was greater in males than in females (47.1% vs. 30.3%, $p=0.03$). The disease was significantly less severe in the patients who survived than in those who did not. The vitamin D status differed between males and females ($p=0.027$). The vitamin D status was lower in the more severe cases than in the less ($p=0.036$), and vitamin D deficiency was more prevalent in patients who died than in those who lived. Vitamin D concentration was negatively correlated with hospital stay duration. The 25(OH)D concentration was significantly greater in patients who survived than in those who did not ($p<0.001$). Conclusions: Pneumonia severity and mortality risk were greater and hospital stays longer in vitamin D-deficient patients than in those with higher vitamin D status.

کلمات کلیدی:

.Disease severity, Mortality, Pneumonia, Vitamin D

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