

Risk Factors for Mortality in Elderly Diabetic Patients with Pneumonia

Hakan Kocoglu, Yildiz Okuturlar, Samet Sayilan, Hanise Ozkan, Deniz Yilmaz, Kamala Ganglaliyeva, Esra Demir, Irem Kirac Utku, Mehmet Hursitoglu, Ozlem Harmankaya, Abdulbaki Kumbasar

Bakirkoy Dr. Sadi Konuk Education and Research Hospital

Objectives:

In this study we aimed to examine the risk factors associated with mortality of pneumonia among diabetic seniors in Turkish general population.

Methods:

After excluding individuals from other minorities, elderly diabetic patients who had been hospitalized due to pneumonia in recent three years consisted of study population. A total of 610 subjects aged 65 years or older were retrospectively analyzed and 196 patients who had no missing information on variables for the analysis were included. Patients' age, gender, hospital length of stay (LoS), mortality, presenting symptoms, other comorbid illnesses, chest X-ray findings, chest computed tomography (CT) findings, coagulation, complete blood count (CBC), and chemistry results were recorded and statistically analyzed.

Results:

Female/male ratio was 0.83:1 (45.4% female, 54.6% male). Mean age was 79.03 ± 7.25 years, median LoS was 9 days (range: 1-206 days), and mortality rate was 18.9%. Gender and age did not have an impact on mortality. In regard to presenting symptoms only impaired consciousness ($p=0.0001$) and impaired general condition ($p=0.05$) were associated with increased mortality. Similarly, concomitant acute kidney injury (0.026), pretibial edema (0.0001), hypertension (0.05), chronic heart failure (0.012), atelectasis on chest CT (0.0001), abnormal levels of gamma-glutamyl transferase (GGT) (0.033), urea (0.037), creatinine (0.010) and potassium (0.028) were associated with increased mortality. But fever, anemia, concomitant coronary artery disease, chronic renal failure, cerebrovascular disease, Alzheimer disease, all chest X-ray and CT findings (except atelectasis on chest CT) (e.g. right/left effusion, right/left infiltration, cardiomegaly), abnormal levels of all CBC parameters, AST, ALT, LDH, HbA1c, uric acid, total protein, albumin, sodium, and calcium were not associated with increased mortality.

Conclusion:

Although diabetes is an independent risk factor for developing pneumonia, our proposed risk factors should be evaluated in those patients in order to predict increased mortality.

