

## 108. MULTIDIMENSIONAL APPROACH TO EXACERBATION OF COPD

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**Introduction:** Chronic obstructive pulmonary disease (COPD) is not only an established major cause of mortality and morbidity but is increasing in worldwide prevalence despite current medical interventions. Exacerbation of chronic obstructive pulmonary disease has a negative impact on mortality, quality of life, leading to limitation of physical activity and also presents a significant burden. One of the tools for risk stratification of COPD exacerbation is BAP-65 which includes: elevated blood urea nitrogen, altered mental status, pulse > 109 beats/ minute, age > 65 years.

**Objective of the study** is to estimate the mortality risk of patients with COPD exacerbation using the BAP-65 score.

**Materials and methods:** We have evaluated 106 patients with COPD exacerbation, who were hospitalized in Institute of Phtysiopneumology "Chiril Draganuic" between 2014-2016. The average age being  $65.5 \pm 3.8$  years. We analyzed spirometry data, BAP-65 score, 6 minute walking test and quality of life was assessed by CAT test.

**Results:** The obtained data of the study group demonstrated the predominance of men 84 (80%) versus women 22 (20%). In the study group as BAP-65 score the patients were divided into 5 classes. The more patients were classified as class III – 36 (33.9%) and class I - ( 31.1%). The BAP-65 score determined the mortality risk in our study – 33 (31,1%) patients have a probable mortality risk of 0,50%, 19(17,9%) cases – mortality risk is 1,4%, 36(33,9%) cases have a mortality risk of 3,7%. A higher mortality risk of 13% have 16 (15,09%) patients and only 4(3,7%) patients have a probable mortality risk of 26,20%.

We performed correlation analysis between BAP-65 score and quality of life, exacerbations rate, 6-minute walk test. The BAP-65 score had strong correlation with quality of life assessed by CAT ( $r=0.83$ ,  $p < 0.01$ ) and good correlation with exacerbations rate ( $r = 0.62$ ,  $p < 0.01$ ). We did not find any statistically significant correlation between BAP-65 score and 6 minute walk test distance ( $r = -0.09$ ,  $p < 0.001$ ).

**Conclusion:** The BAP-65 score is a simple tool for multidimensional assessment of COPD exacerbation. The BAP-65 score correlates strongly with rate of COPD exacerbation and quality of life assessed by CAT.

**Key words.** Exacerbation, BAP-65 score, CAT test, mortality risk.