A. Pandur[1], B. Banfai[1], B. Radnai[1], J. Betlehem[1], [1]University of Pecs, Institute of Emergency Care and Pedagogy of Health - Pecs – Hungary:

Are the risk stratification's methods effective to diagnose pulmonary embolism in patients with heart failure?

Abstract: P3375

Are the risk stratification's methods effective to diagnose pulmonary embolism in patients with heart failure?

Authors:
A. Pandur[1], B. Banfai[1], B. Radnai[1], J. Betlehem[1], [1]University of Pecs, Institute of Emergency Care and Pedagogy of Health - Pecs - Hungary,

Background/Aims: Pulmonary embolism is connected with high morbidity and mortality. Prognostic assessment is important for the management of patients with pulmonary embolism. Pulmonary embolism often has a nonspecific clinical presentation. The use of diagnostic testing in an attempt to avoid missing the potentially life-threatening diagnosis increases both cost and use of medical resources. Various score systems exsist to evaluate the probability of pulmonary embolism, which can be used for risk stratification, to get the most accurate diagnosis. The aim of our study was to review the evidence for existing prognostic models in acute pulmonary embolism and determine validity and usefulness for predicting patient outcomes.

Materials and methods: We performed a retrospective analysis of pulmonary embolism in three hungarian emergency departments. Data from 519 patients were included for this retrospective analysis. The Wells, Geneva, Padua score systems were used to reevaluate retrospectivly the risk of pulmonary embolism. The diagnosis of pulmonary embolism was accurate, when the CT verified it. We allowed the weighted probability of the score systems. We analyzed which score system is the most specific for the risk stratification of pulmonary embolism in our cases. Data were analyzed with a SPSS 20.0 statistical software. In our study, chi-square test, Independent-Samples T-test, ANOVA, korrelation interpretation were performed. P values of <0.05 were considered to be statistically significant.

Results: 238 (45,8%) men and 281 (54,2%) women patient-documentation were participated in the study. 156 patients got into the ED due to heart failure. In 68 cases (43,5%) the CT verified pulmonary embolism. Padua score indicated in 16 cases (p=0,2), Geneva score in 29 cases (p=0,05) and Wells score in 6 cases (p=0,1) a high probability of pulmonary embolism, from the 68 cases, where the CT is positive for PE.

Conclusions: Our study showed that Genfi score (which was calculated from the patients complaints, medical history and physical examination) had the closest correlation with the diagnosis. Finally we can conclude that risk-evaluation is indispensable in acute heart failure because pulmonary embolism can be in the backround as the root cause.