

EVALUATION OF PATIENTS USING SEVERITY SCORES OF COMMUNITY-ACQUIRED PNEUMONIA

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Abstract

Aim. The aim of the study was to compare the efficiency of different indices used in assessment of severity of community-acquired pneumonia (CAP) and site of treatment decision making.

Materials and methods. 125 patients with community-acquired pneumonia, aged from 19 to 86 years (mean age $46,5 \pm 16,7$ years, 63 (50,4%) males) were enrolled into the study. PORT, PSI, CURB-65, CRB-65 and SMRT-CO indices were used to assess the severity of CAP. ROC-analysis (Receiver Operating Characteristic) was used for evaluation of the discriminatory ability (the diagnostic value of the method) of different score systems.

Results. Since different indices such as PORT, PSI, CURB-65, CRB-65, SMRT-CO were not sufficient for making a decision regarding the site of management (general department or intensive care unit) we developed our own hospitalization necessity index (HNI). Comparing the ROC-curves we found that SMRT-CO score was most accurate for predicting the need of outpatient management of patients with CAP (AUC = 0,650). The proposed HNI possessed the greatest diagnostic accuracy (less than 6 points) – AUC = 1,0. Assessing the expediency of short-term hospitalization we revealed that SMRT-CO score (AUC = 0.670) and HNI index (AUC = 0.669) had statistically significant diagnostic value. Comparing the ROC-curves for predicting the appropriateness of ICU admission we revealed high diagnostic accuracy of the SMRT-CO score (AUC = 0,872) and HNI index (AUC = 0,860). Other indices (CRB-65, CURB-65, PORT) failed to provide reliable recommendations for admission to the ICU (AUC = 0,500).

Conclusion. HNI index was superior in predicting an expediency of outpatient management of patients with CAP. When making a decision whether a patient should be admitted to ICU or general department it is recommended to use SMRT-CO or HNI indices.

Key words: community-acquired pneumonia, severity of pneumonia index.

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