S-064

COMPARISON OF 30-DAY MORTALITY PREDICTIVE VALUES OF EXPANDED A-DROP SCORE AND PSI SCORE IN COMMUNITY-ACQUIRED PNEUMONIA PATIENTS

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OBJECTIVE: Pneumonia is a common acute respiratory infection that affects the alveoli and distal bronchial tree of the lungs. Lower respiratory tract infections are the 5th leading cause of death with 4.2% in our country. High mortality rates have led to the development of a set of predictive scoring systems designed to optimize the care and treatment of Community-Acquired Pneumonia (CAP). These include the expanded A-DROP score and the pneumonia severity index (PSI). In our study, we aimed to compare the 30-day mortality estimation values of the PSI and the expanded A-DROP score, and to evaluate the effectiveness of the expanded A-DROP score, which is easier to use, against PSI.

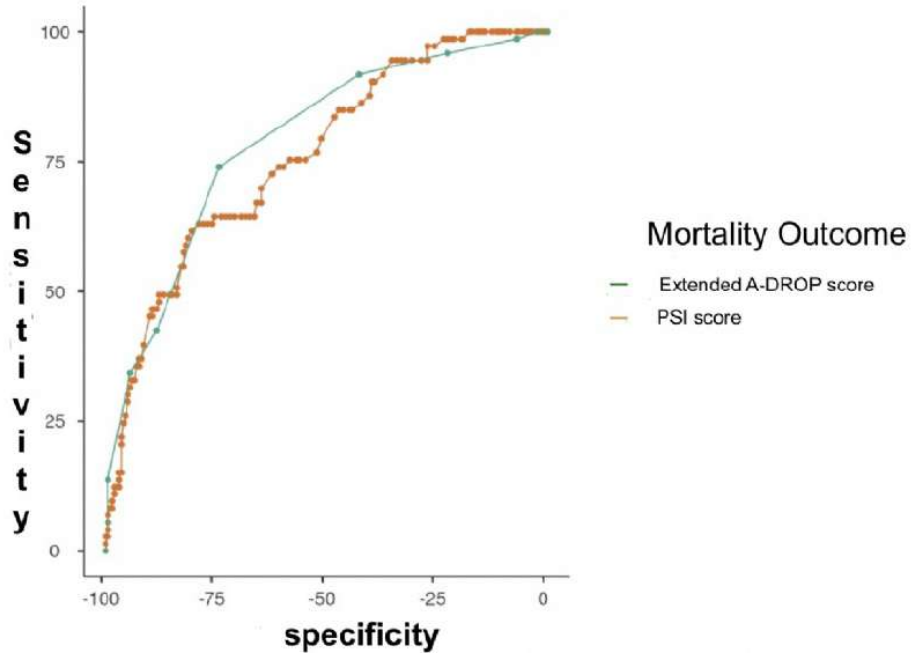
MATERIAL and METHODS: This is a prospective observational single-center study. Our study included all patients who were admitted to the Marmara University Pendik Training and Research Hospital emergency department between July 1, 2022 and December 31, 2022 and were thought to have community-acquired pneumonia according to the guidelines of the American Thoracic Society. Expanded A-DROP score and PSI scores of all patients were calculated. The predictive value of PSI and expanded A-DROP scores for 30-day mortality and, inpatient service, intensive care unit (ICU), discharge status were compared.

RESULT: Total of 293 patients were included in our study. Of the 272 patients included in the analysis, 73 (26.8%) resulted in mortality within 30 days. When the PSI classes and mortality and outcomes of the patients included in the study were compared; 0 (0%) in class 1, 0 (0%) in class 2, 1 (1.4%) in class 3, 25 (34.2%) in class 4, 47 (64.4%) had an outcome with mortality within 30 days. When the expanded A-DROP classes and mortality outcomes were compared; It was found that 3 (4.1%) patients in class 1, 16 (21.9%) patients in class 2, and 54 (74%) patients in class 3 resulted in mortality within 30 days. When the 30-day mortality prediction values of the expanded A-DROP and PSI scores were compared, no statistically significant difference was found between them (p=0.299, AUC (A-DROP):0.790 / AUC (PSI):0.761).

CONCLUSION: Although the mortality prediction value of the expanded A-DROP score was better than the PSI score, there was no significant difference between them. In high-risk groups, the expanded A-DROP score was found to be similar to the PSI score for predicting mortality. In low risk groups, the mortality prediction value of the PSI score was found to be superior to the expanded A-DROP score. More validation studies are needed for the expanded A-DROP score to be used in clinical practice.

Keywords: pneumonia, community acquired pneumonia, pneumonia risk scores, PSI, expanded A-DROP

Comparison of 30-day mortality prediction values of extended A-DROP and PSI scores on ROC Curve



Comparison of PSI classes/expanded A-DROP classes and 30-day mortality groups

PSI classes n, (%, percentage)	Total (n=272)	Mortalite		p
		Present (n=73)	Absent (n=199)	<0,001*
1	3 (1,1)	0 (0)	3 (1,5)	
2	20 (7,4)	0 (0)	20 (10,1)	
3	24 (8,8)	1 (1,4)	23 (11,6)	
4	120 (44,1)	25 (34,2)	95 (47,7)	
5	105 (38,6)	47 (64,4)	58 (29,1)	
Expanded A-DROP classes				
1, n (%,percentage)	48 (17,6)	3 (4,1)	45 (22,6)	<0,001*
2, n (%)	119 (43,8)	16 (21,9)	103 (51,8)	
3, n (%)	105 (38,6)	54 (74,0)	51 (25,6)	

** Pearson Chi-Square test, statistically significant values are marked in bold*