Titolo

Syndromes of the Aorta: evaluation in the Emergency Room (SAVER)

Identificativo

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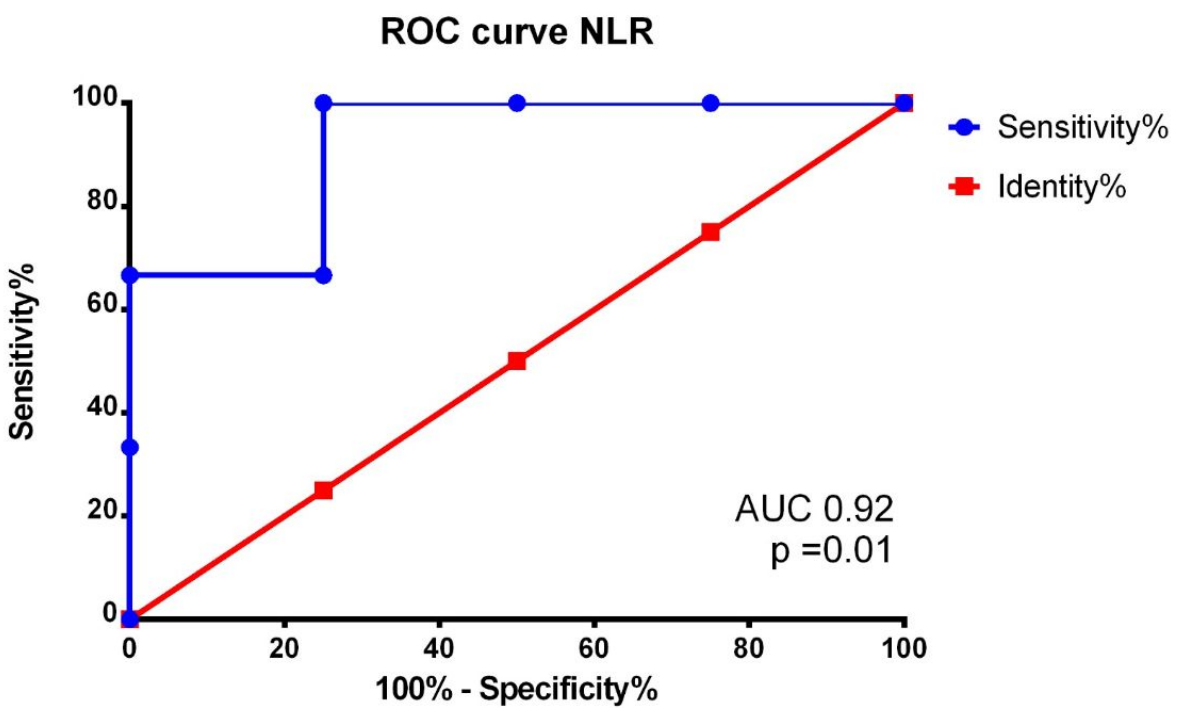
Introduction

Acute aortic syndromes (AAS) constitute a heterogeneous group of diseases, some of them with high mortality rates. Accurate data on the incidence and risk factors for AAS are limited. The actual incidence of AAS is hard to estimate due to difficult diagnosis.

Recent studies have shown a significant interaction between platelet count and D-dimer level. In particular, thrombocytopenia and elevated D-dimer levels significantly increase the risk of in-hospital mortality in AAD patients. This does not emerge from the study of these 7 clinical cases.

Methods: we analyzed 7 patients evaluated for AAS in the emergency department (ED). All patients underwent lab evaluation, including platelets e D-dimer, physical examination including blood pressure and peripheral Oxygen saturation percentage (SpO2), and Aortic Dissection Detection Risk Score (ADD-rs).

	Group A	Group D
Age (years)	53,66 ± 21,38	63,5 ± 24,93
Sex (male/female)	3/0	4/0
Systolic blood pressure (mmHg)	133,33±28,86	106,66±30,5
Diastolic blood pressure (mmHg)	81.67±14.43	66.67±15.27
Heart rate (bpm)	126,66±55,07	73,33±16,07
Peripheral oxygen saturation (%)	**98,33±0,57**	**96,75±0,50**
Hemoglobin (g/dL)	14,33±,61	12,5±1,71
WBC (10^3 uL)	9,66±2,51	11,94±3,31
Neutrophils %	63,00±,00	74,00±8,16
Lymphocytes %	24,33±4,72	16,50±5,06
NLR	**2.66±0.57**	**4.84±1.57**
TnI (pg/mL)	5.20 ± 2.56	31.15 ± 48.57
NT-proBNP (pg/mL)	165.50 ± 132.23	165.50 ± 212.84
D-Dimers (ng/mL)	12658.67 ± 16170.87	11177.50 ± 9757.37
ADD- risk score	2 [0-2]	2 [1.25-2]

ROC curve NLR — AUC 0.92 p =0.01

Results: All patients were male, aged 59.29±22.16. Three of them were affected by arterial hypertension, one by diabetes, and one was with Ehler-Danlos mutation. Dead patients (group D) were not significantly different compared to those alive (group A) in terms of age, ADD-rs or blood pressure evaluation at admission. We found a significant decrease in SpO2 at admission (Group D 96.75±0.50 vs Group A 98.33±0.58 %, p=0.01) as well as a significant increase in neutrophil-to-lymphocyte ratio (NLR) (Group D 4.84±1.46 vs Group A 2.66±0.51, p=0.02). NLR has a high AUC (0.92) as well as SpO2 (AUC 0.98), consistent to identify patients with a worst outcome at ED evaluation.

Discussion and conclusion: Change in immune response looks to be able to identify ED patients that may present a worst outcome for AAS. Similarly, SpO2 appears to have the same predictive power.

Affiliazioni

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RESEARCH ABSTRACT : CARDIOLOGIA