

Prognostic value of neutrophil-to-lymphocyte ratio in hospitalized patients with COVID-19

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Introduction: Neutrophil-to-lymphocyte ratio (NLR) is a simple biomarker of inflammation that can be measured from a routinely blood test. Previous studies showed that NLR had a prognostic value in various conditions such us sepsis, malignant tumors and cardiovascular diseases.

Aim: The aim of the study was to determine the prognostic value of the neutrophil-to-lymphocyte ratio (NLR) in moderate to severe COVID patients.

Methods: We conducted a retrospective study including 577 patients with laboratory-confirmed COVID-19 infection hospitalized in the pulmonology department B of Abderrahmen Mami hospital from 9 October 2020 to 01 Juillet 2021. We defined 2 groups: Group1 (n=41): patients with $NLR \geq 8$, Group2 (n=128): patients with $NLR \leq 8$.

Results: The population was majority male (76,3%) with a mean age of 66 ± 13 years old. Hypertension was the most common comorbidity (44%) followed by diabetes (35%), obesity (28%) and chronic obstructive pulmonary disease (20%). The median time between symptoms onset and admission was 8 days in the two groups. The common clinical manifestations at admission were shortness of breath (84%), fatigue (78%), fever (77%) and cough (70%). The high NLR group had more severe form of the disease on admission than the other group ($p=0,03$). Mean hospital stay was not different between the two groups ($p=0.1$). Patients in the first group had more intensive care unit referrals ($p=0,01$) and a higher incidence of mortality ($p=0,002$).

Conclusion: NLR could be a valuable biomarker to predict disease progression in patients with moderate to severe COVID-19 in order to improve the treatment strategies.

Biography

N.Boubaker is working at Abderrahmen Mami Hospital, Tunisia