

#1960 - Association between neutrophil to lymphocyte ratio and pulmonary arterial hypertension in hemodialysis patients of Semnan Kosar hospital

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Body **Introduction:**Incidence of ESRD is increasing and it has many complications. pulmonary arterial hypertension is one of the major complications that can increase mortality in these patients. The neutrophil to lymphocyte ratio (NLR) is inexpensive, widely available. If there is a significant association between NLR and pulmonary arterial hypertension, this can be attributed to systemic inflammation and predisposing conditions for pulmonary arterial hypertension In hemodialysis patients, this study can be used to better control and perform early intervention in these patients.

Materials:This cross-sectional study was performed on 40 hemodialysis patients of Semnan Kosar Hospital during the years 2016 to 2018. All patients were echocardiography and pulmonary artery characteristics were recorded. Hemoglobin and white blood cell countwith differential, serum albumin levels, ESR and CRP were measured in standard methods. Finally, NLR patients with pulmonary arterial hypertension were compared with patients with normal pulmonary hypertension.

Results:NLR of hemodialysis patients with pulmonary arterial hypertension was higher than that of normal hemodialysis patients with pulmonary arterial pressure(2.51 ± 2.1 vs 1.97 ± 0.9). But the difference was not significant. A cut-off value of $NLR \geq 1.5$ had a positive predictive value(PPV) of 90%, negative predictive value(NPV) of 45%, sensitivity of 62% and specificity of 81.8% in the prediction of pulmonary arterial hypertension. There was no significant correlation between NLR and other parameters including age, duration of hemodialysis, BMI, hemoglobin, ESR, CRP and albuminwith pulmonary arterial hypertension.

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Conclusion: More extensive studies with larger sample sizes are suggested to evaluate the NLR value in predicting pulmonary hypertension in hemodialysis patients.

Keywords: End Stage Renal Disease (ESRD), pulmonary arterial hypertension, neutrophil to lymphocyte ratio (NLR)

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