

The value of CRP/ALB and NE/LY in predicting coronary artery disease

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Abstract

Background. Coronary heart disease is a serious threat to people's life and health, and timely intervention and treatment are important. This study aims to investigate the clinical value of the serum C-reactive protein/albumin ratio (CRP/ALB, CAR) and the neutrophil/lymphocyte ratio (NE/LY, NLR) in predicting the extent of coronary artery disease. **Methods.** A total of 649 patients hospitalized in the Department of Cardiology of the Second People's Hospital of Hefei with coronary angiography from January 2019 to December 2021 were included for retrospective analysis. The coronary artery disease group (n=406) and the control group (n=243) were divided according to the angiographic findings. The coronary artery disease group was divided into a mild lesion group (GS <40, n=235) and a severe lesion group (GS ≥ 40, n = 171) according to the Gensini score (GS). Compare the differences in CAR and NLR between groups. Spearman analysis was used to test the correlation between CAR, NLR and GS, logistic regression analysis was used to screen independent influencing factors of coronary artery disease and severe coronary lesions, and the ROC curve was used to analyze the predictive value of CAR, NLR and the combination of both for multiple lesions in coronary arteries. **Results.** CAR and NLR were higher in the coronary artery disease group than in the control group, and CAR and NLR were higher in the group with severe coronary lesions than in the group with mild lesions ($P < 0.05$). Spearman correlation analysis showed that CAR and NLR were positively correlated with GS ($r_{CAR} = 0.519$, $P < 0.05$; $r_{NLR} = 0.492$, $P < 0.05$). ROC analysis showed that CAR, NLR and the combination of the two had predictive value for multiple coronary lesions. The predictive efficacy was higher when the two were combined than the individual indexes ($P < 0.05$). **Conclusion.** CAR and NLR are independent predictors of the extent of coronary artery lesions and can be used for diagnosing and evaluating coronary heart disease.

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