

23RD EUROPEAN

HEART DISEASE AND HEART FAILURE CONGRESS

February 19-21, 2018 | Paris, France

Coronary artery revascularization effect on serum levels of interleukin-27

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Background: T-helper mediated responses to CADs can affect the disease progression. IL-27 plays a role as a double-edged sword in T-helpers regulating and has important roles in CAD progression. The aim of this study is to determine the relations of plasma IL-27 level and CAD patients' characteristics.

Materials: 121 patients with CAD were enrolled in this study and needed information was gathered by questionnaire. Blood samples of each group were obtained at the time of admission to the emergency room and three months after revascularization. Left Ventricle Ejection Fraction (LVEF) and Gensini score were recorded after revascularization. IL-27 plasma level was measured by ELISA.

Results: The mean of pre-procedure IL-27 level in each group of patients were 255.86 ± 116.23 pg/ml in AMI patients, 145.08 ± 114.52 pg/ml in UA patients, 92.53 ± 40.22 pg/ml in SA patients and 136.67 ± 78.02 pg/ml in control group, the difference between AMI and other groups was significant ($p < 0.05$). The mean of post-procedure IL-27 level in each group of patients was 174.36 ± 123.15 pg/ml in AMI patients, 172.49 ± 115.06 pg/ml in UA patients, 202.61 ± 122.22 pg/ml in SA patients and 132.62 ± 141.59 pg/ml in control group and there was no significant difference between each pair of groups ($p = 0.144$). Alteration of IL-27 plasma level three months after revascularization compared with pre-revascularization level was significant in all groups except control group, this change was an increment in UA and SA patients and decrement in AMI group ($p < 0.05$). The relation between Gensini score and EF with pre-revascularization IL-27 plasma level was not significant in none of all groups except in SA ($p < 0.005$ for both Gensini score and LVEF). The relation between Gensini score and EF with pre-revascularization IL-27 plasma level was not significant in none of all groups ($p \geq 0.05$).

Conclusion: Plasma level of IL-27 is acutely relative with the extent of the coronary atherosclerotic plaque rupture area. It can be used as a novel biomarker for surveying the stability and coronary plaque rupture status and can help cardiologists to modulate the medications and decide for next therapeutic steps.

Biography

Mohadese Firouzi has finished his cardiology in Zanzan university of medical science in 2017. Amir Hossein Heydari is medical student in Zanzan University of medical science.

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