The Relationship between Nesfatin-1 Serum Levels with Epicardial Fat Thickness in Patients with Acute Myocardial Infarction (AMI) and Comparison with Patients with Stable Angina

Abstract

Background: Nesfatin-1 is a peptide with metabolic effects that has recently been revealed to be closely related to with a variety of chronic inflammatory diseases.

Aim: The aim of the present study was to investigate the association between nesfatin-1 levels and angiographic, biochemical, and echocardiographic findings, especially with the epicardial fat thickness (EFT) in patients with coronary artery disease.

Methods and Materials: In a cross sectional study, three groups were selected from 90 patients candidate for angiography, including 30 subjects as a control group with normal angiography but a history of chest pain, 30 patients with a diagnosis of stable angina pectoris (stable-AP), and 30 patients with a diagnosis of acute myocardial infarction (acute-MI). Parameters measured in all subjects included demographic, biochemical, echocardiographic, and angiographic.

Results: The results showed that serum levels of nesfatin-1 in acute-MI and stable-AP groups were significantly reduced compared to the control group ($P < 0.001$ and $P < 0.01$, respectively), but there was no significant difference between acute-MI and stable-AP groups. In addition, the findings demonstrated that there was a negative association between nesfatin-1 and LDL-C, Gensini score, white

blood cell, troponin T, EFT, and CK-MB, but there was a positive association with left ventricle ejection fraction (%).

Conclusion: Decreased levels of nesfatin-1 in acute-MI and stable-AP groups as well as its association with several parameters such as EFT, CK-MB, and Gensini score, may indicate the potential role of nesfatin-1 in the process of atherosclerosis, which requires further study.