

In stent restenosis after percutaneous coronary intervention

To the Editor,

I read the article entitled "High levels of HB-EGF and interleukin-18 are associated with a high risk of in-stent restenosis" by Jiang et al. (1) with great interest, recently published in *Anatolian Journal of Cardiology* 2015; 15: 907-12. The investigators reported that higher levels of heparin-binding epidermal growth factor-like growth factor (HB-EGF) and interleukin-18 (IL-18) are associated with a high risk of in-stent restenosis after percutaneous coronary intervention. Jiang et al. (1) demonstrated the significance of inflammation and higher HB-EGF and IL-8 levels for in-stent restenosis. However, because of some confounding factors, I would like to emphasize some important points to clarify the findings of this article.

First, lesion-related characteristics, including ACC/AHA classification, total occlusion, ostial lesion, and severity of calcification, have strong relationship with in-stent restenosis (2). In the present study of Jiang et al. (1), there are no data about these significant predictors of in-stent restenosis for both groups. Higher incidence of complex lesions and lesions with high risk for in-stent restenosis in higher HB-EGF and IL-8 levels may be a reason of higher in-stent restenosis for this group. Hence, the investigators should consider these factors to clarify the exact significance of HB-EGF and IL-8 levels for in-stent restenosis.

Second, the investigators did not report the treatment with some important medications that are known to prevent in-stent restenosis. Statins and renin-angiotensin-aldosterone system blockers reduce in-stent restenosis (3,4). Therefore, lower incidence of treatment with these drugs may be another reason for higher in-stent restenosis in patients with higher HB-EGF and IL-8 levels.

Finally, it has been demonstrated that regular exercise training significantly reduces in-stent restenosis after percutaneous coronary intervention in patients with acute myocardial infarction (5). The investigators should comment on presence or absence of exercise training for each group.

In conclusion, inflammation plays a significant role in the pathogenesis of atherosclerosis. However, to define higher HB-

EGF and IL-8 levels as indicators of in-stent restenosis, lesion-related characteristics, medications, and regular exercise training should be taken into consideration.

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Accepted Date: 11.11.2015

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DOI:10.14744/AnatolJCardiol.2015.6775

