

Reference

1. Sadr-Ameli MA, Saedi S, Saedi T, Madani M, Esmaeili M, Ghar-doost B. Coronary slow flow: Benign or ominous? *Anatol J Cardiol* 2015; 15: 531-5. [\[CrossRef\]](#)

Address for Correspondence: Dr. Tahereh Saedi
Rajaei Cardiovascular, Medical, Research Center
Iran University of Medical Sciences, Tehran-Iran
Phone: +00982123922003
E-mail: taherehsaedi80@gmail.com

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.

Mehmet Eyüboğlu

Department of Cardiology, Special Izmir Avrupa Medicine Center; Izmir-Turkey

References

1. Jiang H, Liu W, Liu Y, Cao F. High levels of HB-EGF and interleukin-18 are associated with a high risk of in-stent restenosis. *Anatol J Cardiol* 2015; 15: 907-12. [\[CrossRef\]](#)
2. Hoffmann R, Mintz GS. Coronary in-stent restenosis - predictors, treatment and prevention. *Eur Heart J* 2000; 21: 1739-49. [\[CrossRef\]](#)
3. Yoshikawa M, Nakamura K, Nagase S, Sakuragi S, Kusano KF, Matsubara H, et al. Effects of combined treatment with angiotensin II type 1 receptor blocker and statin on stent restenosis. *J Cardiovasc Pharmacol* 2009; 53: 179-86. [\[CrossRef\]](#)
4. Kamishirado H, Inoue T, Sakuma M, Tsuda T, Hayashi T, Takayanagi K, et al. Effects of statins on restenosis after coronary stent implantation. *Angiology* 2007; 58: 55-60. [\[CrossRef\]](#)
5. Lee HY, Kim JH, Kim BO, Byun YS, Cho S, Goh CW, et al. Regular exercise training reduces coronary restenosis after percutaneous coronary intervention in patients with acute myocardial infarction. *Int J Cardiol* 2013; 167: 2617-22. [\[CrossRef\]](#)

Address for Correspondence: Dr. Mehmet Eyüboğlu
Özel İzmir Avrupa Tıp Merkezi, Kardiyoloji Kliniği
İzmir-Türkiye

Phone: +90 232 207 19 99
E-mail: mhmtlybg@gmail.com

Accepted Date: 11.11.2015

©Copyright 2016 by Turkish Society of Cardiology - Available online at www.anatoljcardiol.com

DOI:10.14744/AnatolJCardiol.2015.6775



Author's Reply

To the Editor,

Many thanks to the author for their important comments to our paper entitled "High levels of HB-EGF and interleukin-18 are associated with a high risk of in-stent restenosis" published in *Anatolian Journal of Cardiology* 2015; 15: 907-12 (1). In the study, we demonstrated that HB-EGF may be used to evaluate the severities of restenosis and coronary artery lesion and inflammatory responses may involve in the process of restenosis.

First, we collected data including demographic characteristics, medical history, location of the vascular stenosis, severity and type of the stenosis, location of the stent implantation, type of the stent, type of the balloon, blood flow grade (TIMI), time of coronary angiography, in-stent restenosis and its location, de novo stenosis, and second stent implantation (1).

The effect of regular exercise training was not evaluated (2). We agree this factor can provide complementary information. Therefore, this factor needs to be considered in future studies.