

arrhythmias, which may contribute to CSFP. Moreover, it is not clear which combination of anti-ischemia and anti-anginal drugs have been prescribed in effectively treating the variable presentations of CSFP, as listed in Table 2 (1). Furthermore, whilst we appreciate that echocardiography is a reliable and reproducible tool for assessing left ventricular function (LVF), it remains sensitive to patient echogenicity (3). It would have been interesting to see if the authors experienced any technical difficulties in evaluating LVF due to poor echocardiographic imaging and whether they attempted to evaluate LVF with the application of contrast-enhanced echocardiography, which would be a more sensitive imaging modality (3).

Second, the authors only used angiography to determine the diagnosis of CSFP according to a myocardial infarction frame count (MIFC) above 27 frames for all vessels, following correction for the length of the left anterior descending artery (1). A study by Nie et al. (4) focused on angiographic features of coronary arteries between control vs CSFP patients. They concluded that CSFP compared with normal subjects was associated with a higher tortuosity index and greater number of distal branches in coronary arteries at end-systole; therefore, the role of coronary angiography may be important to determining the anatomical properties of coronary arteries in CSFP patients compared to an equal selection of normal non-CSFP subjects.

Lastly, the authors could have explored other important demographic variables such as body mass index (BMI) and QT interval ratio, where studies have shown a potential link to CSFP. For instance, Tenekecioğlu et al. (5) showed that QTd, Tp-Te interval, and Tp-Te/QT ratio were markedly prolonged in these patients on electrocardiogram (ECG). This will predispose to future events like angina pectoris, myocardial infarction, and life-threatening arrhythmias. Perhaps an ECG may have been requested to evaluate QT interval relationship especially when 36 patients underwent repeat coronary angiography.

Overall, we praise the authors' useful insight into CSFP; however, we feel a comparative cohort study with normal vs. CSFP subjects, detailed angiography readings, and QT interval ratio measurements may have yielded further information in understanding the pathogenesis of this disease.

Mohammed Omer Anwar, Yasser Al Omran
Barts and the London School of Medicine and Dentistry, Garrod Building, Turner Street, Whitechapel; London, E1 2AD-United Kingdom

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Address for Correspondence: Dr. Mohammed Omer Anwar Barts and the London School of Medicine and Dentistry Garrod Building, Turner Street, Whitechapel, London E1 2AD-United Kingdom
Phone: +44 7414614706
E-mail: m.o.anwar@smd11.qmul.ac.uk

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Author's Reply

To the Editor,

We thank the authors of the letter for their valuable comments. In our study entitled "Coronary slow flow: Benign or ominous?" published in *Anatolian Journal of Cardiology* 2015; 15: 531-5 (1), the focus was on the evaluation of characteristics of patients presenting with coronary ischemic symptoms and who happened to only have coronary slow flow phenomenon in coronary angiography; the goal was to understand the natural history of these patients. For this reason, the patients who were admitted for catheterization due to causes other than coronary symptoms were excluded.

Congenital patients have their own specific underlying cardiac pathophysiology, with abnormal coronary anatomies; therefore, they were not taken into account in our study. None of the evaluated patients suffered from specific arrhythmias.

Prescribed drugs might have varied based on individual patient's conditions, but the core components remained constant in the majority of cases.

Regarding echocardiography, echogenicity did not really impose a problem that necessitated the use of contrast material or other modalities, and global left ventricular function was determined in different echocardiographic planes.

Last but not least, we agree with the comment that evaluation for further characteristics, including those parameters mentioned by the authors of the letter, could be related and important in patients with coronary slow flow phenomenon and should become the subject of future studies.

Tahereh Saedi, Mohammad Ali Sadrameli, Sedigheh Saedi
Rajaei Cardiovascular, Medical and Research Center, Iran University of Medical Sciences; Tehran-Iran

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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

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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

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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.