Letter by Kaneda and Terashima Regarding Article, “The Long-Term Effect of Coronary Stenting on Epicardial and Microvascular Endothelial Function”

To the Editor:

With great interest we read the article by Dr. Lim et al., examining coronary epicardial endothelial and microvascular function in patients with chest pain and angiographically nonsignificant coronary artery disease 17.1±17.1 months after stent implantation. The authors demonstrated that coronary epicardial endothelial and microvascular function after drug-eluting stent (DES) implantation were not significantly different from those after bare metal stent implantation.

First, although the authors concluded “the study does not support a long-term worsening of vascular function by DES implantation,” we believe that more data are needed to determine the effect of DES implantation on the downstream (micro) vasculature, that is, frequency of patients with symptom without stenosis after DES or bare metal stent implantation. If patients treated with DES more frequently presented with symptom without stenosis than patients treated with bare metal stent, it would suggest that DES impair the downstream vascular function. Therefore, it would be of great help if the authors could provide data on how often patients presented with symptom without stenosis after DES or bare metal stent implantation.

Second, although the authors excluded patients with obstructive coronary artery disease (>30%) on coronary angiogram, some new lesions may result from endothelial dysfunction after stent implantation. A recent intravascular ultrasound study demonstrated a significant plaque increase at >5 mm distal to the stent edge after paclitaxel-eluting stent implantation. We would appreciate if the authors could provide frequency of new lesion at segment distal to the implanted stent segment.

Third, endothelial dysfunction after stent implantation may be time-dependent and an interaction may exist between time and stent type. We would appreciate if the authors could provide endothelial function divided by follow-up duration and stent type, as microvascular function in Table 4.

Finally, previous studies demonstrated that 10% to 20% of patients had >50% coronary vasoconstriction in response to acetylcholine infusion before stent implantation. Chest pain soon after stent implantation may result from endothelial or microvascular dysfunction which had existed before stent implantation.

Disclosures

None.

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References

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