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 signifi-
cantly different from those after bare metal stent implantation.

First, although the authors concluded “the study does not sup-
port a long-term worsening of vascular function by DES implanta-
tion,” 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 microvascu-
lar 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 dysfunc-
tion which had existed before stent implantation.

Disclosures

None.

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