

iMATTER

LETTERS TO THE EDITOR

Impact of Additional Ballooning on Plaque Prolapse After Stent Implantation in Patients With Acute Myocardial Infarction

With great interest, we read the article by Hong et al. (1), in which they examined the incidence, predictors, and outcome of plaque prolapse after stent implantation in acute myocardial infarction. We have reported the incidence, diagnostic characteristics, and clinical features of plaque prolapse in 303 patients undergoing nonemergent stent implantation (2). In a subgroup analysis, prolapse areas did not differ significantly after additional ballooning from those immediately after stent implantation. It would be of great help if the authors would provide intravascular ultrasound data before and after additional ballooning to clarify the behavior of plaque prolapse after stent implantation in acute myocardial infarction.

*Hideaki Kaneda, MD, PhD
Yasuhiro Honda, MD
Peter J. Fitzgerald, MD, PhD

*Center for Research in Cardiovascular Interventions
Stanford University Medical Center
300 Pasteur Drive, Room H3554
Stanford, California 94305
E-mail: hdkaneda@gmail.com

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REPLY

In our study (1), we did not perform additional ballooning for the plaque prolapse (PP) lesions routinely. Instead, we performed additional ballooning when we observed stent under-expansion after stent implantation. Among a total of 85 PP lesions, additional ballooning was performed in 30 lesions. The PP areas did not differ significantly after additional ballooning from those immediately after stent implantation (maximum PP areas, $0.8 \pm 0.6 \text{ mm}^2$ vs. $0.7 \pm 0.5 \text{ mm}^2$, $p = 0.5$, and PP volumes, $2.6 \pm 2.0 \text{ mm}^3$ vs. $2.3 \pm 1.7 \text{ mm}^3$, $p =$

0.4, respectively). However, when we compared 30 PP lesions with additional ballooning with 55 PP lesions without additional ballooning, there was a trend that cardiac enzymes were increased more significantly in the additional ballooning group compared with the nonadditional ballooning group (Δ creatin kinase-myocardial band, $+14.5 \pm 39.3 \text{ U/l}$ vs. $+10.5 \pm 28.9 \text{ U/l}$, $p = 0.092$, and Δ cardiac troponin I $+19.8 \pm 63.4 \text{ ng/ml}$ vs. $+14.5 \pm 46.3 \text{ ng/ml}$, $p = 0.088$, respectively). The incidence of stent thrombosis was not significantly different between the additional ballooning group and the nonadditional ballooning group during 1-month clinical follow-up (1 of 30 [3.3%] vs. 1 of 55 [1.8%], $p = 0.8$). Therefore, our results suggest that it is not necessary to perform additional ballooning to reduce PP areas when we observe PP after stent implantation in patients with acute myocardial infarction because there are no differences in PP areas and the risk of stent thrombosis, with a strong trend toward more significant myonecrosis in PP lesions with additional ballooning compared with PP lesions without additional ballooning.

Young Joon Hong, MD, PhD
*Myung Ho Jeong, MD, PhD, FACC

*Heart Center of Chonnam National University Hospital
Chonnam National University Medical School
8 Hak Dong, Dong Ku
Gwangju 501-757
Korea
E-mail: myungho@chollian.net

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Cardiac Computed Tomography to Visualize Typical Variants of the Right-Sided Origin of the Left Main Coronary Artery

Astonishingly, Ropers et al. (1) begin their excellent imaging vignette describing various right-sided origins of the left main coronary artery with the statement that anomalous right coronary arteries (ARCA) emerging from the left sinus, unlike anomalous left coronary arteries arising from the right sinus, are considered harmless, despite the fact that their own second reference (2) documents 4 of 27 sudden deaths (confirmed at autopsy by Basso et al. [2]) because of ARCA from the left sinus.

Moreover, there are numerous reports that ARCAs originating from the left sinus are uncommon but may lead to sudden