



Letter to the editor

In reply to “The novel whole-organ high-definition CT scanner: A promising diagnostic method for coronary stented patients with unfavorable HR”



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ARTICLE INFO

Article history:

Received 22 January 2019

Accepted 7 February 2019

Keywords:

Coronary CT angiography

Improved spatial and temporal resolutions

Coronary stent

We have read with interest the comments of Dr. Yang on our study [1]. We agree with the remark regarding the wider clinical application of coronary CT angiography (CCTA) allowed by the capability to assess the coronaries with the novel scanner despite an irregular heart rate. Indeed, our findings are confirmative of those recently reported in atrial fibrillation patients without previous revascularization [2]. Moreover, we agree with the comment regarding the residual weakness of CCTA in the stent assessment, despite the improved scanner performance: small stent and coexistence of coronary calcifications. As concerns the stent diameter, although the improved spatial resolution, the novel scanner is still less accurate in the detection of significant in-stent restenosis in the setting of <3.0 mm stents (diagnostic accuracy 82.1% vs. 95.7%, <3.0 mm vs. ≥3.0 mm, respectively). Moreover, the presence of large calcification in the site of the stented segment remains a challenge, as previously described in large meta-analysis [3], although the reduction of motion artifacts related to the improved temporal resolution may have a favorable influence on the calcium-related beam-hardening artifacts [2]. Finally, we underline the comment on the potential benefit to add a functional assessment by CT perfusion to the anatomical CCTA alone. Interestingly, nowadays, CT perfusion is

the only method that allows a functional evaluation of stented lesion by CT. Indeed, although the CT-derived FFR has been recently demonstrated as an effective method in the decision-making of multivessel CAD [4], this non-invasive modality is still not available for the clinical use in stented patients.

Conflict of interest

None.

Funding sources

None.

Acknowledgments

None.

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