

Authors' response

We read the comments of Mao et al. [1] entitled "Renal fractional flow reserve: Is it available to predict hypertension improvement after stenting?" with great interest and would like to thank you for them and briefly summarize the discussion.

Firstly, the authors cited preliminary studies performed by Mitchell et al. [2] and Leesar et al. [3], confirming the relationship between renal fractional flow reserve (rFFR) and blood pressure response after renal artery stenting. The important difference between our trial and abovementioned studies is that we assessed the blood pressure changes in 24-hour ambulatory recordings instead of office blood pressure measurements.

Secondly, we agree with the authors that the threshold values for resting translesional pressures ratio (Pd/Pa ratio) and rFFR are difficult to establish because of the limited size of the subject groups in different trials.

Finally, we support the opinion that further investigations should focus on novel technologies: not only noninvasive quantification of FFR by computational fluid dynamics which has superior

accuracy to conventional computed tomography, especially in the presence of calcifications or poor contrast opacification but also invasive, like instantaneous wave-free ratio (iFr), that does not require vasodilation. It is also possible that only hybrid approach using several modalities will have the best accuracy in renal artery stenosis assessment and blood pressure improvement prediction.

Conflict of interest: none declared

References

- Mao Y, Qi X, Xu W, Zhou L. Renal fractional flow reserve: Is it available to predict hypertension improvement after stenting? Cardiol J, 2014; 21: 329.
- Mitchell JA, Subramanian R, White CJ,et al. Predicting blood pressure improvement in hypertensive patients after renal artery stent placement: Renal fractional flow reserve. Catheter Cardiovasc Interv, 2007; 69: 685–689.
- Leesar MA, Varma J, Shapira A et al. Prediction of hypertension improvement after stenting of renal artery stenosis: comparative accuracy of translesional pressure gradients, intravascular ultrasound, and angiography. J Am Coll Cardiol, 2009; 53: 2363–2371.

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