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Patients with renal artery stenosis may not be suitable for renal denervation

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To the Editor

I have read with great interest a paper authored by Dr Vogel and colleagues published in the advanced online edition in this journal [1]. Dr Vogel and colleagues reported the safety and efficacy of renal denervation (RDN) under standard-of-care conditions from the Heidelberg registry (N=63). They found that RDN significantly decreased office blood pressure by 26/9 mm Hg at 1 year after the procedure and RDN was safe during the 1-year follow-up.

Different from the Symplicity HTN-1 and HTN-2 trials [2,3], this study included patients with challenging anatomy of renal arteries (18 of the 63 patients), including significant renal artery stenosis, dual renal artery, polar artery, previous renal stenting and fibromuscular dysplasia. The authors found that blood pressure was decreased by 15/6 mm Hg at 6 months in this subgroup of patients; however, the change did not reach statistical significance, highlighting the necessity under standard-of-care conditions to follow the selection criteria set by the Symplicity HTN-1 and HTN-2 trials.

It is worthwhile to note that three patients had significant renal artery stenosis before RDN: one patient had a 50% stenosis in the left renal artery, and two had a 50% stenosis in the right renal artery. Systolic blood pressure of these three patients at 6 months after RDN was changed by 20, -6, and 60 mm Hg, respectively. Clearly, their blood pressure values did not decrease after RDN; instead, it seemed that blood pressure increased after the procedure. Two case reports reported that renal artery stenosis occurred within 6 months after RDN causing recurrent hypertension [4,5]. Therefore, it is worthwhile to know whether the pre-existing renal artery stenoses progressed in the study from the Heidelberg registry. Can Dr Vogel and colleagues clarify this issue? In addition, blood pressure of the last patient in Table 2 seemed to decrease from 170 at basal to 130 mm Hg at 6 months; whereas the value in the Δ SBP column indicated an increase of 40 mm Hg. Can Dr Vogel and colleagues clarify this?

In summary, it may be necessary to follow the selection criteria set by the Symplicity HTN-1 and HTN-2 trials to select patients for RDN under standard-of-care conditions. In particular, patients with pre-existing renal artery stenosis may not be suitable for RDN.

Conflict of interest

The authors declare that they have no conflict of interest.

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