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Renal artery stenosis may be responsible for the gradual return of high blood pressure after renal denervation

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To the Editor

I have read with great interest a paper authored by Dr Papademetriou and colleagues published in this journal.¹ This paper reported a case that renal denervation impressively lowered blood pressure and heart rate in a woman with morbid obesity and severe resistant hypertension. The office and ambulatory systolic blood pressure was decreased by 113 and 76 mm Hg, respectively, at 1 month after the procedure. However, the blood pressure reduction after renal denervation in this patient became smaller over time. For example, the reduction in ambulatory systolic blood pressure was 76, 59, 47, and 15 mm Hg, respectively, at 1, 3, 6 and 12 months after the procedure. The possible reasons underlying this observation were not provided by the authors.

Two case reports documented that renal artery stenosis occurred in the patients after renal denervation.^{2,3} The EnligHTN I study (N=46) reported that two patients showed progression of a pre-existing renal artery stenosis:⁴ one was adjudicated as serious (>50% occlusion in artery diameter) and the other was non-serious. The occurrence of renal artery stenosis was responsible for the recurrent hypertension observed in some patients.^{2,3} Therefore, it is possible that renal artery stenosis may occur in the patient reported by Papademetriou and colleagues,¹ which may explain the observation that blood pressure was gradually increased over time. Therefore, can Dr Papademetriou and colleagues clarify whether they have carried out computed tomography angiography in this patient during the follow-up? If the answer is no, it may be worthwhile to do so to investigate this possibility.

Conflict of interest

The authors declare that they have no conflict of interest.

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