



The Medical **Bulletin**

In Hypertension

Roadmaps for Reducing High Blood Pressure

Below are some key learning points to help reinforce the impact of this activity.

Many patients with hypertension fail to achieve treatment goals and are at increased risk for cardiovascular morbidity and mortality as a result. Poor adherence to prescribed treatment plans is a major barrier to achieving blood pressure (BP) goals, with one study finding that half of all patients stopped their once-daily medication within 1 year.

It is important to determine if a patient's uncontrolled BP is due to resistant hypertension. Resistant hypertension is defined as blood pressure above current goals despite ≥ 3 medications prescribed at optimal dosing, with the exclusion of secondary causes and the demonstration of patient adherence to medications. When confronted with resistant hypertension, there are limited options to further address uncontrolled BP.

Renal denervation (RDN) is a catheter-based procedure that targets the sympathetic nervous system by interrupting the activity of sympathetic nerves in the perivascular space of the renal arteries, thus reducing sympathetic influence on renal vascular resistance, renin release, and sodium reabsorption, resulting in a reduction in blood pressure.

Recent follow-up data from the Global SYMPPLICITY Registry demonstrated that RDN resulted in significant BP-lowering that was sustained for at least 3 years, as measured by both office BP and 24-hour ambulatory BP assessment. Renal function was also maintained over time, and no signs of reinnervation were observed.

Second-generation RDN sham-controlled trials have also utilized the bias-free tool of measuring 24-hour ambulatory BP, and these trials have demonstrated efficacy and safety in patients with and without medications. The SPYRAL HTN-OFF Med Pivotal trial (without medications) showed effective BP reduction at 3 months post-procedure vs sham, and the SPYRAL HTN-ON MED trial (with combination drug therapy) showed significant BP reduction out to 3 years.

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