

## **Catheter-Based Renal Sympathetic Denervation (RDN) for Resistant Hypertension: Initial Experience**

*Hassan, Amin<sup>1</sup>; Storch, Shimon<sup>2</sup>; Sharif, Dawod<sup>1</sup>; Dobrecky-Mery, Idit<sup>1</sup>; Rosenschein, Uri<sup>1</sup>  
<sup>1</sup>Bnai-Zion Medical Center, Cardiology, Haifa, Israel; <sup>2</sup>Bnai-Zion Medical Center, Nephrology Unit, Haifa, Israel*

Background: Based on Semplicity-1 and Semplicity-2 studies, catheter-based Renal sympathetic Denervation (RDN) is proved as an effective and safe treatment for resistant hypertension.

Aim: To evaluate early and late effects of RDN on BP in patients with resistant HTN in our initial experience.

Methodes:Eleven patients with resistant HTN were treated by RDN.

Inclusion Criteria: Office SBP  $\geq 160$  mmHg ( $\geq 150$  mmHg in type II-DM), On 3+ more anti-HTN medications, Renal artery diameter  $\geq 4$ mm and  $\geq 20$  mm length and eGFR of  $\geq 45$ . Exclusion Criteria: Significant renal artery abnormalities, Type I-DM, and MI, unstable angina or CVA in the prior 6 months, ICD or pacemaker or pregnancy.

Results: Eleven patients (7males), age 47-67 years, 3 with type II-DM, 5 with hyperlipidemia, 4 smokers, 4 CAD and 1 PVD, eGFR  $89 \pm 25$ , Mean number of antihypertension medications 3.75, all on diuretics & ACEI and/or ARB, 8 on Beta blockers, 7 on Ca Channel Blockers and 2 on clonidine. RDN was successfully done in 10, in one patient RDN catheter could not be introduced due to unfavorable vascular anatomy.

Procedure Detail & Safety: RDN procedure time was 70-120 -median 87- minutes, 100-200ml 1:2 diluted contrast, 5-7 ablations per artery were done. Intravenous narcotics & sedatives used to during RF ablations. RDN was completed successfully in all 10 patients. No catheter or generator malfunctions, no vascular abnormalities at any site of RF delivery. No early or late major or minor complication, No electrolyte disturbances or change in renal function.

Baseline BP was  $168 \pm 21 / 84 \pm 9$  decreased significantly to  $150 \pm 21 / 81 \pm 6$  and  $142 \pm 12 / 76 \pm 9$ , one and 3 months after RDN, respectively.

<IMAGE04> Figure 1: Systolic BP after RDN

Conclusions: Catheter-based renal denervation is safe and effeciant,was done successfully in 10 patients with treatment-resistant essential hypertension, resulted in significant reductions in BP. The technique was applied without minor or major complications.