RENAL SYMPATHETIC DENERVATION FOR RESISTANT HYPERTENSION IN THE REAL WORLD CLINICAL PRACTICE: PRELIMINARY RESULTS OF THE SYMPLECTICITY VENEZUELA REGISTRY


Background: Catheter-based renal denervation (RDN) had shown to be an effective treatment to control blood pressure (BP) in patients with resistant hypertension. In the Symplicity HTA-2 randomized controlled trial, RDN lowered systolic blood pressure by 32 ± 23 mmHg. In addition, radiofrequency (RF) ablation of renal arteries reduces sympathetic activity reducing left ventricular mass and insulin resistance. However, the efficacy of this novel procedure in the real world clinical practice is still unknown.

Methods: Prospective, multicenter, observational registry of all consecutive patients submitted to RDN at 14 centers in Venezuela between February and September 2012. We included patients with resistant hypertension defined as systolic BP ≥ 160 mmHg despite taking three or more antihypertensive drugs (including a diuretic) with normal renal function (estimated glomerular filtration rate ≥ 45 ml/min/1.73 mts²). The primary end-point was reduction in systolic BP at 1 and 6 months follow-up, the secondary end-point was any adverse event after the procedure.

Results: Sixty patients were included for this analysis; mean age was 56.1 ± 10, 42% were females, 38% caucasians and 32% diabetics. Pre-procedural office BP was 178/101 mmHg (SD 20/15), the mean number of anti-hypertensive medications was 4.4 (91% diuretics with 21% aldosterone antagonist). Regarding procedural characteristics 9.9 ± 1.6 RF ablations were done per patient, with a mean impedance reduction of -14%. At 30 days office BP reduction was -39/18 mmHg (SD 18/14, p=0.002) and at 6 months (n=15) -34/19 mmHg (SD 11/6, p=0.004). One intraprocedural renal artery dissection occurred before radiofrequency energy delivery that required no additional treatment.

Conclusions: Catheter-based RDN effectively reduces BP in the real world scenario; in this preliminary experience, no major complications were observed.