Conclusions: The decrease of NE veno-arterial difference is a directly assessable physiologic marker reflecting the effects of RDN with reduced renal NE release from sympathetic nerves. The current systematic follow-up at 3 and 6 months of our patients will allow the evaluation for a possible association of the pre-post ΔNE RV-RA with the BP response.

TCT-211
Ambulatory blood pressure and dipping-pattern after catheter-based renal sympathetic denervation in patients with resistant hypertension
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Background: Ambulatory blood pressure monitoring (ABPM) is mandatory in every patient with uncontrolled hypertension. Nighttime blood pressure and non-dipping is associated with cardiovascular morbidity and mortality. Catheter-based renal sympathetic denervation (RD) in patients with resistant hypertension has been shown to reduce sympathetic drive and office blood pressure. The influence of RD on ambulatory blood pressure (ABPM) has not been studied in details.

Methods: One-hundred patients with resistant hypertension undergoing catheter-based renal denervation were included in the study. Systolic and diastolic blood pressure (SBP/DBP) as well as ABPM (SBP/DBP average, SBP/DBP daytime, SBP/DBP nighttime, heart rate (HR) average) and dipping-pattern were analyzed prior to, and at 3 and 6 months follow-up.

Results: RD reduced office SBP and DBP at 3 and 6 months by 22.9/8.1 mmHg (p = 0.0001), respectively. After 3 and 6 months 24-hour average SBP/DBP was reduced by 8.9/4.9 mmHg (p = 0.019/0.025) and 11.9/5.6 mmHg (p = 0.022/0.011), respectively. Average SBP/DBP were lowered at 3 and 6 months follow-up at daytime by 9.6/5.1 mmHg (p = 0.0001/0.001) and 12.1/1.1 mmHg (p = 0.0007/0.001) and at nighttime by 6.6/5.8 mmHg (p = 0.003/0.005) and 11.3/4.7 mmHg (p = 0.001/0.001), respectively. Renal denervation also reduced maximum SBP by ~11 mmHg at 3 months and by ~14.4 mmHg at 6 months follow-up (p = 0.009 and 0.006) whereas maximum DBP was not changed.

Conclusions: Beside significant reductions in office SBP and DBP, RD also reduced 24-hour average, daytime and nighttime SBP and DBP as well as maximum SBP after 3 and 6 months.

TCT-212
First Report of the 6-Month First in Human results of the OneShot™ Renal Denervation System: The RHAS Study
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Background: Catheter-based renal denervation therapy has emerged as a novel therapy in patients with resistant hypertension (HTN). Although initially performed with a single electrode radiofrequency (RF) catheter, recent advances in catheter designs are using multiple pre-specified electrode positions. This theoretically could improve the safety and efficacy of this treatment. We present the 3-month safety and efficacy data from the international multicenter EnligHTN 1 trial.

Methods: Inclusion criteria include patients from 18-80 years of age with office systolic BP ≥160 mmHg ≥150 for patients with Type 2 diabetes) on ≥ 3 anti HTN agents (including a diuretic) and renal artery diameter ≥ 4mm and length ≥ 20mm. Patients with dual main renal arteries are excluded. The primary end-point is the change in office BP at 6 months from baseline. The safety endpoints include vascular and renal artery complications. Renal artery CT angiography is performed at baseline and repeated at 6 months. Utilizing femoral artery access with an 8Fr RDC guiding sheath the EnligHTN catheter is introduced into the renal artery, and RF energy delivered sequentially for 90 seconds per electrode. The catheter is repositioned, rotated and denervation repeated. Both renal arteries are treated.

Results: In total 46 patients underwent renal denervation. Mean age was 60 ± 10 years and baseline BP 176/96 mmHg. The median procedure time (from initiation to completion of RF delivery) was 34.0 min. The mean number of therapies delivered was 7.7 for the right and 7.4 for the left renal arteries. There was no change in renal function pre and post procedure (eGFR 76 and 75 mL/min/1.73m2 respectively). There were no renal artery or serious vascular complications through 3 months. The BP changes pre-discharge and at 1 month were ~23/9 (p = 0.0001) and ~28/10 mmHg respectively (n=46, p = 0.0001). The preliminary 3-month BP change is ~ -37/17 mmHg(n=24, p = 0.0001).

Conclusions: Renal denervation was performed safely and swiftly in patients with resistant HTN using the EnligHTN catheter. Initial results show a significant early reduction in BP that continues to reduce further at 3 months.

TCT-213
Safety And Efficacy Of A Novel Multi-Electrode Renal Denervation Catheter In Resistant Hypertension: 3 Month Data From The EnligHTN 1 Trial
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Background: Catheter-based renal artery denervation therapy has emerged as a novel therapy in patients with resistant hypertension (HTN). Although initially performed with a single electrode radiofrequency (RF) catheter, recent advances in catheter designs are using multiple pre-specified electrode positions. This theoretically could improve the safety and efficacy of this treatment. We present the 3-month safety and efficacy data from the international multicenter EnligHTN 1 trial.

Methods: Inclusion criteria include patients from 18-80 years of age with office systolic BP ≥160 mmHg (≥150 for patients with Type 2 diabetes) on ≥ 3 anti HTN agents (including a diuretic) and renal artery diameter ≥ 4mm and length ≥ 20mm. Patients with dual main renal arteries are excluded. The primary end-point is the change in office BP at 6 months from baseline. The safety endpoints include vascular and renal artery complications. Renal artery CT angiography is performed at baseline and repeated at 6 months. Utilizing femoral artery access with an 8Fr RDC guiding sheath the EnligHTN catheter is introduced into the renal artery, and RF energy delivered sequentially for 90 seconds per electrode. The catheter is repositioned, rotated and denervation repeated. Both renal arteries are treated.

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Conclusions: Renal denervation was performed safely and swiftly in patients with resistant HTN using the EnligHTN catheter. Initial results show a significant early reduction in BP that continues to reduce further at 3 months.

TCT-214
Abstract Withdrawn