SOUTH AFRICAN HEART ASSOCIATION AND HYPERTENSION SOCIETY CONSENSUS STATEMENT ON RENAL DENERVATION THERAPY

Resistant or uncontrolled hypertension occurs in about 12.8% of treated hypertensive persons, and is associated with increased morbidity and mortality. Renal denervation is a novel procedure for the treatment of resistant hypertension that results in a sustained reduction in blood pressure of the order of 30/10 mmHg. To date there are no outcome studies and with renal denervation and the long-term (beyond 3 years) durability of the blood pressure lowering effect is unknown. Because of the absence of data on long term safety and efficacy, patients undergoing renal denervation should be enrolled in a registry or trial after signing consent to do so. This will be particularly important in the South African context where the demographic profile (particularly age and race) of patients with hypertension is different from those enrolled in the studies to date and the cost implications may be different.

Because of the expense related to the procedure there is a growing need to define patients suitable for the procedure

Prerequisites for denervation:

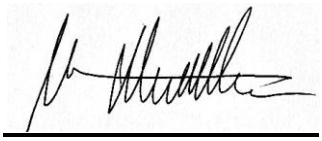
1. Patients with uncontrolled hypertension defined by ambulatory BP monitoring taking >3 antihypertensive drugs, one of which must be a diuretic (hydrochlorothiazide 25 mg or indapamide 2.5 mg), in the optimal doses, or patients with multiple contra-indications or side effects to drug treatment.
2. An abnormal ambulatory BP is defined according to the SA Hypertension Guidelines 2011 as any of the following: Day time mean BP > 135/85 or night time mean > 120/70 mmHg
3. The patient is assessed by a specialist physician or sub-specialist (e.g., cardiologist, nephrologist or endocrinologist) for exclusion of secondary causes of hypertension. Furthermore, it is recommended that following determination of an aldosterone/renin ratio in all patients, if the aldosterone is >500 pmol/L and or the

ratio > 70 the patient should receive a trial spironolactone or be worked up for primary aldosteronism prior to renal denervation.

4. A trial of low dose spironolactone (up to 25mg b.d.) should be considered in patients with no clinical contraindications or relative contraindications (serum K^+ > 4.5 mmol/L or eGFR < 60mls/min).
5. eGFR > 45mls/min, but consideration may be given to patients with eGFR between 30-45 mls/min weighing the risks of contrast vs. the benefits of the procedure.
6. No clinically significant renal artery stenosis on a pre-procedure CT renal angiogram or direct angiography at the time of the denervation. (The latter approach may reduce costs and exposure to contrast).
7. Patients undergoing in RDN in South Africa should be enrolled in a prospective registry or trial

Contra-indications to denervation

1. Complex renal vascular anatomy making denervation technically difficult
2. eGFR < 30mls/min
3. Pregnancy
4. Significant aortic stenosis



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