Renal Denervation Therapy (RDT) in Resistant Hypertension

Resistant hypertension is defined as blood pressure that remains above therapeutic goal despite the use of three antihypertensive drugs including a diuretics in their maximum therapeutic doses. About one third of patients with arterial hypertension are treatment refractory. The hyperactivity of sympathetic nervous system in the occurrence of treatment resistant long standing hypertension has been established both in animal models and in clinical practice. A new catheter system using radiofrequency energy has been developed, allowing an endovascular approach to renal denervation and providing patients, with resistant hypertension, with a new therapeutic option that is minimally invasive and can be performed rapidly under local anesthesia. With this method the afferent and efferent sympathetic nervous system surrounding the renal artey are ablated precisely keeping the renal artery intact. To date this technique has been evaluated only in open lebel trials highly selected resistant hypertensive patients with suitable renal artery anatomy. RDT will significantly enrich the therapeutic armamentarium for hypertension treatment and control in future. RDT proves to have long lasting beneficial effects, patient would have a choice between interventional therapy and cure of hypertension and life long drug therapy with associated expense and potential side effects.