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P432 -Resistant hypertension secondary to bilateral renal artery stenosis: a case report

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Background

Renal artery stenosis (RAS) is the most common cause of secondary hypertension accounting for 1-3% of all causes of hypertension. Of these >90% of cases of RAS are due to atherosclerotic disease. With an aging population, RAS is being seen more commonly. Fibromuscular dysplasia accounts for the other cases of RAS and is usually seen in a younger population.

Case

A 77 year old female was admitted to an inpatient nephrology unit for management of uncontrolled hypertension. Past history was also significant for type 2 diabetes. On admission she was prescribed Losartan 100mg od, Moxonidine 200mcg bd, Doxazocin 16mg od, Atenolol 50mg od. Her baseline blood pressure was on average 210/90 mmHg and baseline serum creatinine was 100µmol/L. Furosemide 120mg bd and Indapamide 1.5mg od were added with little effect on blood pressure. Candesartan 2mg od was added to this regime and this caused an improvement in blood pressure (average systolic BP 140-150 mmHg) but also caused an increase in serum creatinine by 100µmol/L. A MR Angiogram was performed which revealed bilateral renal artery stenosis with ostial luminal narrowing of at least 90% bilaterally. Following suspension of antihypertensives, she underwent bilateral renal artery angioplasty and stent insertion with good intra-procedure angiographic result observed. Post-angioplasty blood pressures demonstrated some immediate improvement with an average reading of 170/78mmHg whilst taking no antihypertensive medications.

Discussion

In patients with poor response to anti-hypertensive medications there should be a high index of clinical suspicion for bilateral renal artery stenosis. This suspicion should be raised further if a significant decrease in kidney function is seen with the addition of ACE inhibitors or Angiotensin Receptor Blockers, as was observed in this case. Whilst studies have shown there to be only modest improvement in blood pressure control in patients with atheromatous bilateral renal artery stenosis undergoing angioplasty and stenting as compared to medical management alone, it remains an important treatment option for those with medication resistant disease.