Endovascular interventions in symptomatic atherosclerotic renal artery disease

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Renal artery stenosis (RAS) refers to any vascular lesion causing narrowing of the renal artery. Two most common causes are fibromuscular dysplasia (FMD) and atherosclerotic artery disease with atherosclerosis being the most common disease that affect the renal arteries. Patients with atherosclerotic renal artery disease are commonly older and have multiple cardiovascular risk factors.¹The diagnostic algorithm for RAS includes Doppler ultrasonography, computed tomography angiography and magnetic resonance angiography. According to current guidelines, routine revascularization is not recommended, except for cases in which hypertension is caused by FMD and episodes of heart failure or pulmonary oedema caused by RAS². We present a series of 13 patients treated with PTA for RAS (Figure 1) in our hospital in 2 consecutive years. Median age was 70 years. 62% of patients were female with multiple risk factors for atherosclerotic vascular disease – 38% had family history of coronary artery disease, 46% had coronary artery disease, 46% had type 2 diabetes mellitus, 100 % had arterial hypertension, 77% had dyslipidemia, 15% were current smokers and 31% had polivascular artery disease. Eight patients had intervention on left renal artery and five patients had intervention of right renal artery while one patient had intervention on both renal arteries. Indication for renal artery stenting was resistant hypertension and recurrent episodes of heart failure or pulmonary oedema.



FIGURE 1. Left renal artery stenting.

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