



A 42-Year-Old Man with a Solitary Kidney

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Introduction

It is estimated that 1/2000 people have a solitary kidney and they are at risk for developing arterial hypertension and impaired renal function [1]. Hypertension is an independent risk factor for progression of renal disease in people born with a solitary kidney. Early detection, regular follow up and prompt management of blood pressure may help slow the progression of renal function impairment [2,3].

Case description

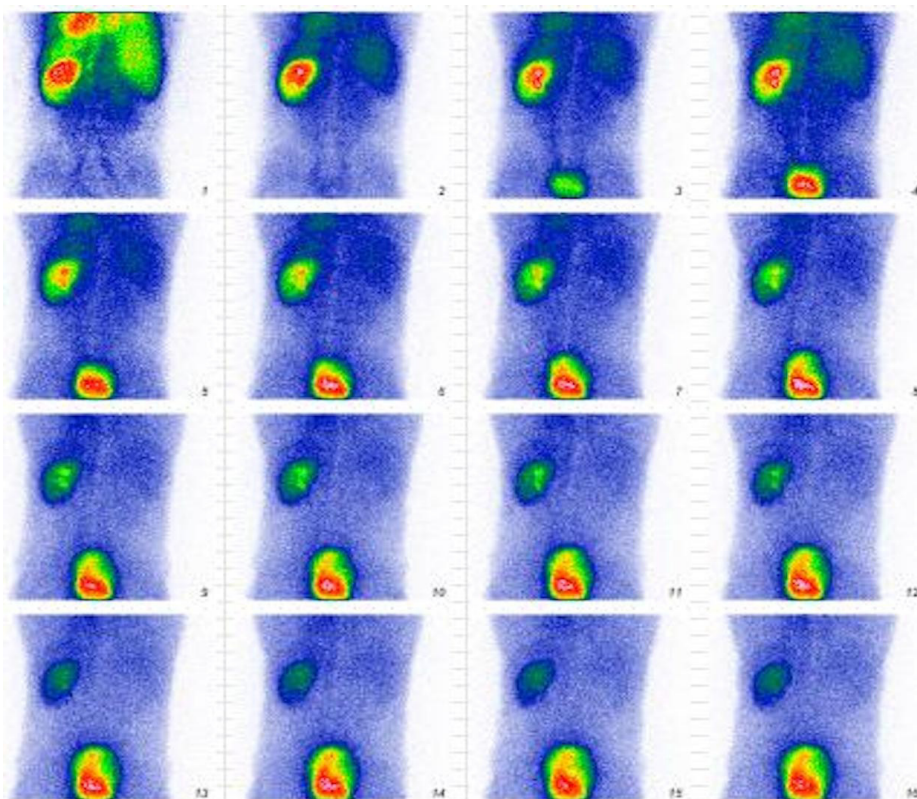
A 42-year-old man with hypertension presented to our hospital for a second opinion regarding management of his elevated blood pressure. He had been diagnosed about a year ago and has been on irregular use of antihypertensives. He was asymptomatic and his blood pressure on both arms while seated was 160/100mmHg. He had no physical signs to suggest a secondary cause of his hypertension. His labs revealed normal thy-

roid profile and urinalysis. He had elevated serum creatinine of 118umol/l (62.00-106.00) with normal blood urea nitrogen and serum electrolytes.

Serum uric acid levels were mildly elevated at 525umol/l (202.0-416.0). A renal duplex ultrasound showed an enlarged left kidney (13.0 x 6.5) cm with a normal Doppler velocity (peak at 37.5cm/sec). No hydronephrosis, mass or calculi seen. The resistive index in the left renal vessel was 0.8. The right kidney could not be appreciated and right renal agenesis was suspected. A renal scan was arranged and he was initiated on S-amlodipine 2.5mg daily, tabs hydralazine 25mg bid and Carvedilol at a dose of 12.5mg bid. Two weeks after the initial presentation, his renal scan (**Figure 1**) revealed a normal functioning left kidney with absence of functioning renal tissue in the right renal bed confirming renal agenesis. His blood pressure on this visit was 130/82mmhg and was scheduled to return after a month for follow up.



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Conclusion

We present a man with a solitary functioning left kidney and hypertension as well as renal insufficiency. It has been reported that 47% of people with unilateral renal agenesis end up developing hypertension. Optimal blood pressure control and regular follow up of his renal function may help to slow the progression of renal disease.

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