

Images in Nephrology
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Complete atherosclerotic occlusion of infra-renal aorta and bilateral renal artery stenosis

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A 37-year-old Caucasian woman presented to her primary care physician 3 years ago with worsening pain in her lower limbs, which was suggestive of intermittent claudication. She had been a 20 pack-year smoker. Physical examination done on presentation (2007) was normal. All peripheral pulses were palpable and she had a normal blood pressure at the time. She presented again 3 years later with increasing lethargy and rest pain in her lower limbs. She had severe hypertension (200/130 mmHg). She was subsequently referred to our clinic and to a vascular surgeon. Clinical examination revealed absent dorsalis pedis and absent femoral pulses bilaterally with severe hypertension. The following lab values were obtained: urine dipstick—no blood, no protein, haemoglobin 13.7 gm/dL, serum urea 6.1 mmol/L, serum creatinine 99 mmol/L, C-reactive protein 6 mg/L, erythrocyte sedimentation rate 22, serum cholesterol 6.4 mmol/L, autoimmune screen—ANA, ANCA anti-SMA, anti-LKM, anti-mitochondrial abs—all negative. An ultrasound Doppler of her kidney suggested renal artery stenosis. A CT angiogram revealed severe bilateral renal artery stenosis and absence of infra-renal aorta (Figure 1). Further scanning of her vascular tree did not show any evidence of vascular stenosis elsewhere. A provisional diagnosis of Takayasu's arteritis or premature atherosclerotic disease was made. She was treated with aggressive measures to control her blood pressure, high-dose statins and low-dose aspirin. She was strongly advised to quit smoking. She was given high-dose prednisolone. A brachial approach to stent her renal artery was made on two occasions but only the right renal artery could be stented. She went on to have a complicated aorto-femoral bypass operation which showed severe atherosclerotic occlusion in the aorta. Complete occlusion of large elastic vessels is a common correlate of diseases like Takayasu's arteritis [1]. It has also been reported in relation to thrombo-embolic phenomenon of atrial myxomas [2].

Atherosclerotic disease causing complete occlusion of the aorta is rare. CT angiography or magnetic resonance angiography is the imaging modality of choice [3] for confirmation of diagnosis, anatomical localization and revealing physiologic detail such as vessel wall oedema.

Conflict of interest statement. None declared.

References

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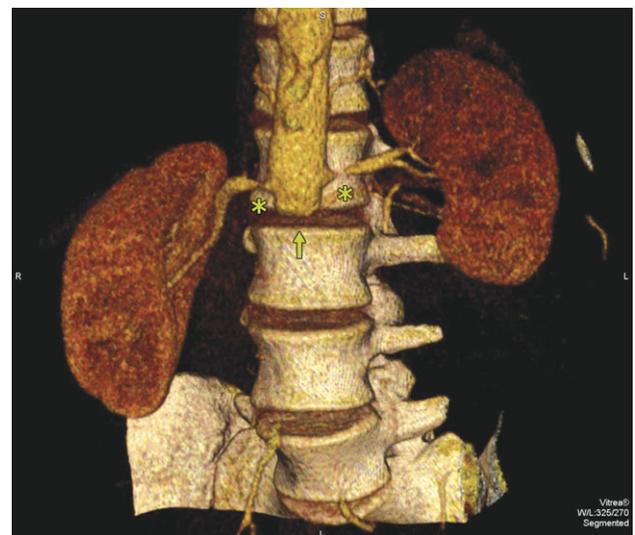


Fig. 1. Absent infra-renal aorta (solid arrow) and bilateral renal artery stenosis (asterisk).