

# Unilateral renal atrophy associated with abdominal aortic aneurysm

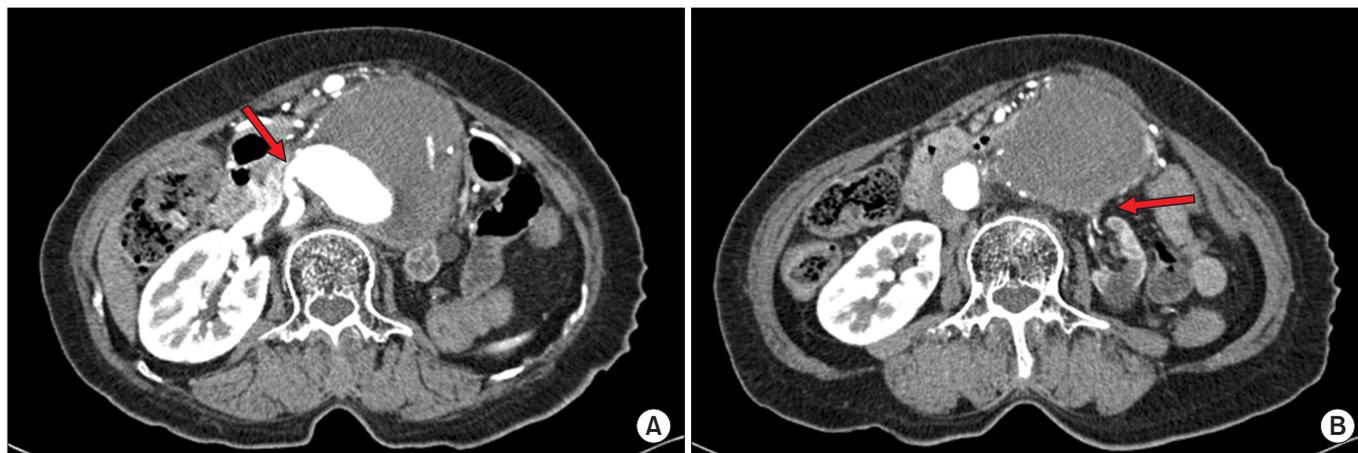
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A 78-year-old woman with hypertension presented with left flank pain. She had been taking angiotensin receptor blockers and beta blockers for the past six years. Her blood pressure was 140/90 mmHg, pulse rate 76/min, hemoglobin 12.3 g/dL (reference range, 12–18 g/dL), and creatinine level 0.5 mg/dL (reference range, 0.5–1.3 mg/dL). Urinalysis revealed microscopic hematuria and no proteinuria. A palpable abdominal mass was detected and pulsation could be felt. Abdominal computed tomographic angiography showed a thrombosed abdominal aortic aneurysm (AAA) with a maximum diameter of 8.5

cm and an atrophic left kidney. The right renal artery originated from the true lumen of the AAA (Fig. 1A), while the left renal artery originated from the false lumen and was smaller and more linear compared to the right renal artery (Fig. 1B). The patient and family refused surgical treatment of the AAA. The left flank pain was caused by herpes zoster, and the patient was discharged after treatment.

AAA refers to a localized, abnormal dilatation of the aorta to a diameter > 3 cm or 50% of the aortic diameter at the diaphragm. If left untreated, the continuing exten-



**Figure 1.** Computed tomographic angiography revealed an 8.5-cm abdominal aortic aneurysm (AAA) and an atrophic left kidney. The arrows indicate that the right renal artery originates from the true lumen of the AAA (A), while the left renal artery originates from the false lumen. The left renal artery is smaller and more linear compared to the right renal artery (B).

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sion and thinning of the vessel wall may eventually result in rupture. Endovascular repair of AAAs has widely replaced open surgical repair due to its minimally invasive nature and accompanying lower perioperative mortality and morbidity. However, its application is impossible in

AAAs involving the renal arteries.

Renal artery clipping induces unilateral renal artery atrophy in the murine two-kidney one-clip model. We report a clinically similar case of AAA involving the renal arteries.