

Flank bruits due to giant renal arteriovenous malformation

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Keywords: flank bruits; nidus; renal arteriovenous malformation

A 58-year-old woman was referred to the nephrology department because of a continuous bruit over the right flank heard by her primary care physician. Blood pressure was 120/80 mmHg. Complete blood count and urinary analysis were within normal limits. She had no history of prior renal surgery or trauma. A large cyst-like lesion at the right kidney with turbulent blood flow was found on colour Doppler ultrasound. Volume-rendered computed tomography (CT) angiography (Figure 1A) demonstrated giant cirriform aneurysmal dilations of the right renal artery with early opacification of right renal vein (arrow) and inferior vena cava (arrowhead), indicating congenital renal arteriovenous malformations (AVMs). Therefore, right renal artery angiography (Figure 1B) confirmed the diagnosis of right giant renal AVMs by demonstrating cirriform arterial communication with early visualization of the right renal vein (arrow) and inferior vena cava (arrowhead). At the same time, endovascular embolization of right AVMs was performed successfully with preservation of renal parenchymal vascular supply. The patient's post-operative course was uneventful, and she was well 6 months later.

Renal AVMs are an uncommon disease of abnormal communications between intrarenal arterial and venous systems. These malformations can be congenital or acquired due to trauma, surgery and tumours.

Acquired AVMs are often termed renal arteriovenous fistula. Congenital AVMs are a rare disease and account for 25% of renal AVMs [1]. Most congenital AVMs are

asymptomatic. Symptomatic AVMs usually present with microscopic or gross haematuria, abdominal pain and flank bruit [2]. Renal Doppler sonography is a non-invasive tool that can help in distinguishing vascular lesions from cystic lesions based on a turbulent blood flow [3]. Renal CT angiography showed a typical appearance of cirriform arterial communication with early visualization of inferior vena cava, indicating congenital arteriovenous malformations. Renal arteriography is still the gold standard modality which can help in a clearly visualization of abnormal vessels with early draining veins and the nidus of the AVM. Transcatheter embolization of renal AVMs can successfully obliterate the nidus of AVMs and preservation of renal normal parenchyma with reduced morbidity in comparison with surgical resection of renal AVMs [4].

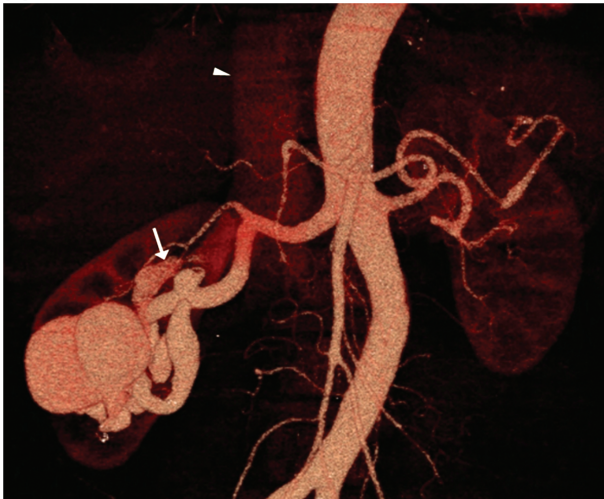
Conflict of interest statement. None declared.

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Received for publication: 26.3.10; Accepted in revised form: 29.3.10

A



B

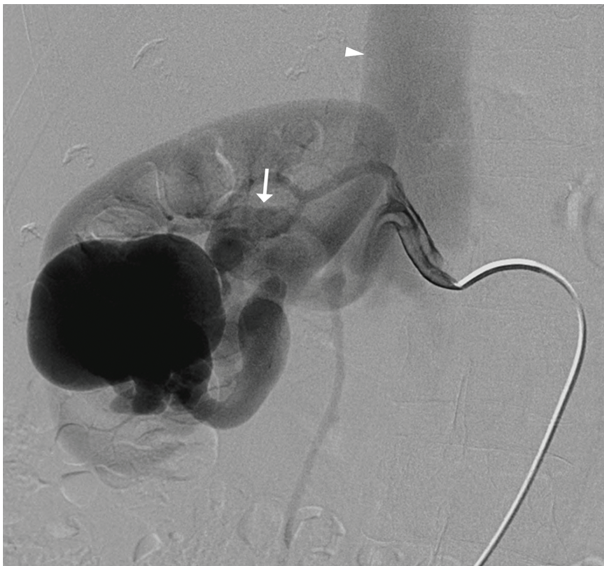


Fig. 1. Volume-rendered computed tomography angiography (**A**) showing giant cirsoïd aneurysmal dilations of right renal artery with early opacification of right renal vein (arrow) and inferior vena cava (arrowhead), indicating of congenital renal arteriovenous malformations (AVMs). Therefore, right renal artery angiography (**B**) confirmed the diagnosis of right giant renal AVMs by demonstrating cirsoïd arterial communication with early visualization of right renal vein (arrow) and inferior vena cava (arrowhead).