

CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

Medical Imaging Quiz – Case 44

A young female adult was referred to EchoHealth Ultrasound Clinic for diagnostic examination of a palpable abdominal mass. The patient had no significant symptoms and her blood tests were normal. Abdominal ultrasound (US) revealed a hyperechoic lesion of the left kidney (fig. 1). A feeding vessel arising from the left kidney was also identified (fig. 2). The lesion was circumscribed with an echogenicity indicative of fat tissue. Multiple lesions with

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similar imaging features and smaller diameter were observed on the upper pole of the left kidney (fig. 3). A CT scan verified the ultrasound diagnosis (figures 4, 5).

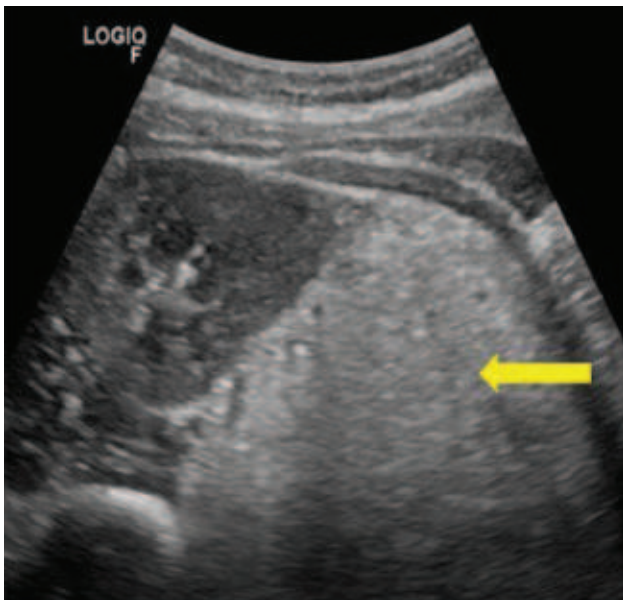


Figure 1. Ultrasound (US) image (axial view) shows an hyperechoic lesion (yellow arrow) in the front surface of the left kidney.

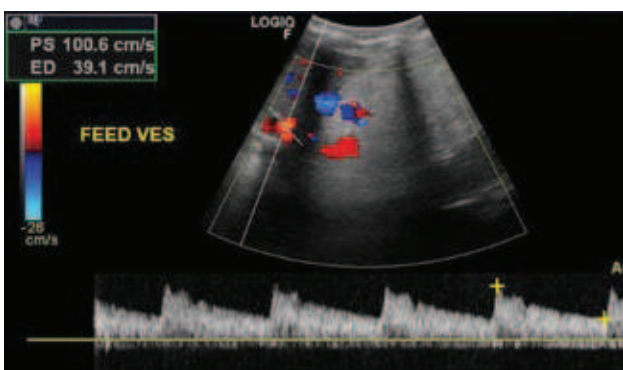


Figure 2. Color Doppler ultrasound (US) image that shows a feeding vessel of the lesion.

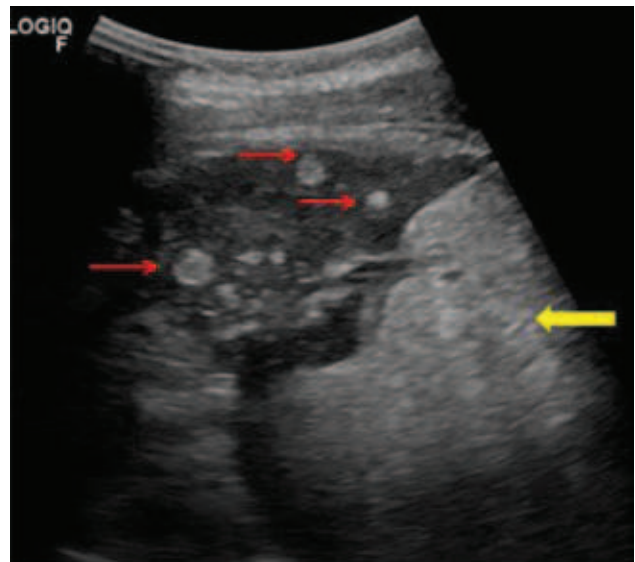


Figure 3. Multiple circumscribed hyperechoic renal lesions (red arrows).



Figure 4. Computed tomography (CT) image (axial view) shows a left renal lesion, with fat component and internal vessels (yellow arrow).

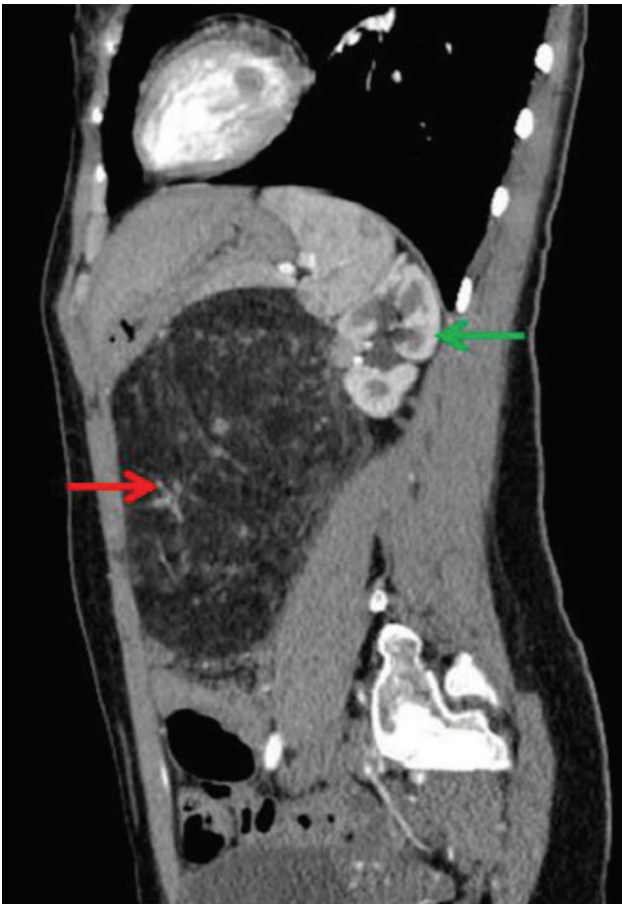


Figure 5. Computed tomography (CT) image (coronal view) shows a giant lesion (red arrow) with sharp borders, fat component and internal dilated vessels. Note the displaced kidney (green arrow).

Comment

Renal angiomyolipoma (AML) is rare benign mesenchymal tumor, composed of variable amounts of adipose tissue, smooth muscle tissue originating from perivascular epithelial cells and blood vessels.^{1,2} AML's vessels lack elastic layer; thus, they predispose to aneurysm formation and hemorrhage. The average size of AML is 2 to 8 cm and there are rarely diagnosed tumors over 10 cm.³ AML is either isolated (approximately 80%), and more frequent in females or either associated with tuberous sclerosis (80% of patients with tuberous sclerosis develop AML). AML may also be associated with neurofibromatosis and von Hippel-Lindau syndrome. AML >4 cm should be followed-up on a semi-annual basis whereas AML <4 cm should be followed-up annually.

References

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