Anechoic crescent sign

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DESCRIPTION

An 88-year-old Japanese man with a history of hypertension, dyslipidaemia, chronic heart failure and an old myocardial infarction after coronary artery bypass surgery 9 years ago was referred to our hospital to assess cardiac function. Although he had no abdominal symptoms, physical examination revealed a pulsatile abdominal mass (video 1). An echocardiogram showed reduced left ventricular ejection fraction, and an abdominal ultrasound revealed a bulky abdominal aortic aneurysm (77 mm × 64 mm) with an echogenic mural thrombus and an anechoic crescent (AC) sign (figure 1A). Abdominal contrast CT revealed an abdominal aortic aneurysm with an eccentric vascular lumen and a mural thrombus containing a peripheral crescent lower density area (figure 1B). Endovascular aortic repair or surgical operation for the aneurysm was not indicated due to the anatomical structure and cardiac function; thus, antihypertensive and anticholesteremic treatments were intensified.

The AC sign in ultrasonography is a crescent-shaped anechoic area between the mural thrombus and abdominal aortic aneurysmal wall, and this sign can be seen in patients with an aortic aneurysm if the mural thrombus causes complicated hemolysis in the portion contacting the aortic wall. The AC sign is correlated to the pathological finding of serosanguinous areas of thrombus liquefaction.1 Although contrast-enhanced CT allows for a detailed depiction of intraluminal thrombus morphology, it cannot evaluate the mobility of thrombus or pathological findings. The main advantages of ultrasound include speed, real-time scanning, evaluation of dynamic or pathological findings, the use on bedside or in emergency room, low cost, widespread availability and lack of patient exposure to ionising radiation.2 Ultrasonography allows for detailed and non-invasive observation, and the AC sign of ultrasonography is one of the key findings of aortic aneurysms.1 3

Learning points

► Anechoic crescent (AC) sign in abdominal ultrasound is associated with an aortic aneurysm.
► AC sign is a crescent-shaped anechoic area between the mural thrombus and abdominal aortic aneurysmal wall.

Contributors

RO and TK contributed to the patient care and wrote the manuscript. YK contributed to critical revision of the article and approved the final version.

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Competing interests

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Figure 1 (A) an abdominal ultrasound showing a bulky abdominal aortic aneurysm (77 mm × 64 mm) with an echogenic mural thrombus and an anechoic crescent sign (white arrows). (B) an abdominal contrast CT showing an abdominal aortic aneurysm with an eccentric vascular lumen and a mural thrombus containing a peripheral crescent lower density area (yellow arrows).

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Images in...

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