M-Mode Echocardiographic Demonstration of Atrial Flutter

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In cases with narrow QRS-complex tachycardia, prompt differentiation of the etiology is crucial in management. M-mode echocardiographic examination of the interatrial septum can give important information in the emergency department.

A 57-year-old man who had palpitation and dyspnea for 2 days visited our emergency department. The initial ECG showed negative saw-tooth–shaped atrial activity in the inferior leads. However, the primary physician misread the wave as an inverted T-wave and diagnosed this as sinus tachycardia with a rate of 150/min (Figure A). The echocardiogram showed mild global hypokinesis and mild left ventricular systolic dysfunction. M-mode examination of the interatrial septum was performed in the subcostal view (Figure B). There were saw-tooth–shaped deflections of the interatrial septum with a rate of 300/min, which was twice that of right ventricular motion. The patient was diagnosed as having atrial flutter and was treated with direct-current cardioversion.

Disclosures

None.
Figure. A, ECG shows narrow QRS-complex tachycardia with heart rate of 150/min with negative saw-tooth–shaped atrial activity in the inferior leads. B, M-mode examination of the interatrial septum in the subcostal view. Saw-tooth–shaped deflections of the interatrial septum have a rate of 300/min (arrow), twice that of right ventricular motion (arrowhead).