Apical hypertrophic cardiomyopathy or left ventricular non-compaction?

Cardiomyopathie hypertrophique apicale ou ventricule gauche non compacté?

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A 76-year-old man was admitted to hospital for a transient ischaemic attack. The electrocardiogram showed atrial fibrillation and biphasic T-waves in the precordial leads. Echocardiography disclosed severe asymmetrical apical hypertrophy with a typical ‘ace-of-spades’ configuration and a maximum left ventricular wall thickness of 21 mm (Fig. 1, Video 1). Although the apical myocardium appeared compact on two-dimensional echocardiography, colour Doppler revealed large linear flows at the left ventricular apex (Fig. 2, Video 2), which broadened the differential diagnosis with deep apical recesses or left ventricular non-compaction. Contrast echocardiography was performed to further clarify the diagnosis, but failed to demonstrate any recesses within the apical myocardium (Fig. 3, Video 3).
Recent reports have shown that apical hypertrophic cardiomyopathy and left ventricular non-compaction may have overlapping phenotypes. Nonetheless, one must be aware of potential pitfalls in the differential diagnosis of these two entities. Severe apical hypertrophy may be accompanied by increased coronary blood flow to the hypertrophied segments, which may be misdiagnosed by colour Doppler as large recesses. In our case, colour Doppler showed typical diastolic flows from the epicardium to the endocardium, characteristic of intramyocardial coronary branches. Contrast echocardiography and cardiac magnetic resonance imaging may allow better delineation of the apical endocardium and, thus, may help to establish the correct diagnosis.

Conflict of interest
None.

Appendix A. Supplementary data
Supplementary data associated with this article can be found, in the online version, at doi: 10.1016/j.acvd.2009.09.014.