Intracardiac echocardiography to guide myocardial biopsy of a primary cardiac tumour

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Abstract

A 61-year-old man presented with recurrent ventricular tachycardia (left bundle branch block morphology, superior axis). Magnetic resonance imaging (Fig. 1) and contrast-enhanced transthoracic echocardiography (Fig. 2) demonstrated an ill-defined mass in the right heart along the free wall of the right atrium, involving the tricuspid valve and extending into the right ventricle. Extensive investigation showed no evidence of extra-cardiac involvement and a tissue diagnosis was recommended. Accordingly, we elected to proceed to myocardial biopsy and, to facilitate accurate tissue localisation, we performed the procedure under guidance with intracardiac echocardiography.

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Several biopsies were then taken from the right atrial side under close intracardiac echocardiography guidance using access from the right subclavian vein (Fig. 4). Histological examination of the tissue obtained revealed non-Hodgkins lymphoma.
Intracardiac echocardiography is ideally suited to imaging structures in the right heart. Though its principal uses have been to guide the closure of atrial septal abnormalities and to aid electrophysiological procedures, there are growing indications for its use.\textsuperscript{1,2} In this case, the intracardiac imaging quality permitted accurate biopsy of a localized intracardiac mass, potentially saving the patient from a more invasive diagnostic procedure.

**Supplementary data**

Supplementary data associated with this article can be found in the online version, at doi:10.1016/j.euje.2006.08.005.

**References**


Figure 2  Contrast enhanced sub-costal transthoracic echocardiography. (RA = right atrium, RV = right ventricle.)

Figure 3  Intracardiac echocardiography of the right heart. (RA = right atrium, RV = right ventricle, TV = tricuspid valve.)

Figure 4  Intracardiac echocardiography demonstrating the biopsy forceps. (RA = right atrium, RV = right ventricle.)