Contrast echocardiography during alcohol septal ablation: friend or foe?

In this image we summarised the echocardiographic findings of three patients with hypertrophic obstructive cardiomyopathy (HOCM) undergoing alcohol septal ablation procedures. In every patient the first septal perforator branch was found to be perfusing areas of the myocardium different from the target upper anterior septum (which was nicely contrasted in all cases). In patient 1 (panel A), the right ventricular septum and the moderator band was clearly opacified. The procedure was successfully finished from another septal branch. In patient 2 (panel B), the papillary muscle with the underlying left ventricular wall was readily illuminated by the contrast agent. In patient 3 (panel C), who had associated severe pulmonary hypertension, most of the right ventricle (free wall, papillary muscles, moderator band, and a large area of the right side of the septum) received the contrast agent (subcostal view). In the last two patients the procedure was eventually aborted (the alcohol was not injected) after testing all available septal branches and related side branches.

Alcohol septal ablation is being increasingly used for the treatment of patients with HOCM and refractory symptoms despite optimal medical management. Our findings highlight the value of contrast echocardiography for direct procedural guidance and to avoid unnecessary and potentially life threatening myocardial necrosis.

Arrows indicate non-targeted areas of myocardium opacified with contrast. LA = left atrium; LV = left ventricle; RA = right atrium; RV = right ventricle.