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46. Contrast echocardiography guidance for alcohol septal ablation of hypertrophic obstructive cardiomyopathy

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A 63-year-old man was admitted due to worsening dyspnoea and faintness related to hypertrophic obstructive cardiomyopathy. Resting left ventricular outflow tract obstruction on echocardiography was 100 mmHg. Angiography showed normal coronary arteries, with one main septal perforator artery suitable for alcohol ablation (Panel A, black arrow). After installation of a 0.014 in. wire, a 1.5 mm over-the-wire angioplasty balloon was placed and inflated (Panel B, black arrow). Injection of the echographic contrast agent (Sonovue\textsuperscript{(R)}, Bracco Imaging) through the catheter showed that the septal artery supplied a myocardial area distal to the subaortic bulge, extending to the tricuspid subvalvar apparatus (Panel C, white arrow). Thus, ablation of this septal artery was given up. Careful review of the baseline angiogram showed the presence of another small, hardly visible, septal perforator artery, 1 cm proximal to the previous one (Panel A, white arrow). It was catheterized by a wire and a balloon was installed (Panel D, white arrow). Contrast injection opacified the septal bulge (Panel E), confirming that it was the target vessel for ablation. Two millilitres of pure ethanol were infused over a period of 15 min. Immediate haemodynamic result was good, with disappearance of either resting or provoked left ventricular outflow tract gradient. Clinical outcome was uneventful.

Alcohol septal ablation has emerged as an effective method to treat symptomatic hypertrophic obstructive cardiomyopathy refractory to medical therapy. However, questions about its acute and long-term safety are still pending. Guidance of the procedure by contrast echocardiography can avoid acute complications which cannot be anticipated by angiography.

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