Hypertrophic cardiomyopathy (HCM) is a primary myocardial disorder with an autosomal pattern of inheritance characterized by inappropriate myocardial hypertrophy. Annual mortality has been reported to be 1% to 2%, and sudden death represents the most common cause. Treatment strategies are 1) medical therapy in patients with mild to moderate symptoms, 2) reduction of septal hypertrophy by surgical myectomy or alcohol ablation, and 3) implantation of an automatic cardioverter-defibrillator in the presence of non-sustained ventricular tachyarrhythmias. A debate has been started on whether surgical myectomy or alcohol ablation of the septum is the appropriate treatment for hypertrophic obstructive cardiomyopathy. Surgical (transaortic) myectomy has been the gold standard in the past 20 to 30 years for treatment of symptomatic patients with significant hemodynamic outflow tract obstruction. However, modern interventional technologies allow reduction of the myocardial septum by injection of alcohol into the first or second septal branch under guidance of two-dimensional (2D)-contrast echocardiography. This percutaneous technique not only has a lower morbidity than surgical myectomy but can be guided precisely by 2D echocardiography. One potential complication is transient (<30%) or permanent (<10%) atrioventricular block III; however, this complication is relatively rare. A randomized trial comparing the two treatment modalities is lacking, and the chance is small that such a trial will be performed because alcohol ablation can be done with high success and low complication rates, leaving only complex interventions (with valvular reconstructions and so on) for surgical myectomy.

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problem of transient block, and permanent pacemaker implantations have decreased from 25% to <10% with the reduction in the amount of injected alcohol (8). The fear of higher incidence of tachyarrhythmias after ablation has never been substantiated.

Most centers with experience in nonsurgical reduction of the interventricular septum by alcohol injection (9) have adopted this technique as a first line treatment of patients with hypertrophic obstructive cardiomyopathy (HOCM). The surgical treatment of HOCM has been reserved for patients with comorbidities such as organic mitral regurgitation or severe coronary artery disease requiring coronary bypass grafting, although simultaneous treatment of coronary artery disease by percutaneous interventions with stent implantation and alcohol ablation of the septum has been performed in patients with HCM.

Catheter-based treatment for HOCM has received much attention and has become the treatment of choice. Surgery is an effective treatment strategy but is associated with considerably higher perioperative morbidity. Surgical myectomy was the treatment of choice for the past 40 years, whereas alcohol ablation of the septum is the treatment of choice for patients with HOCM in the 21st century. It is clear that answering the question whether alcohol ablation or surgical myectomy is the treatment of choice would require a randomized trial comparing these two treatment modalities in a larger population of 240 patients in each group (80% power; event rate 7% in population 1 and 15% in population 2). It would require many centers worldwide to obtain this number of patients in a reasonable time span. However, for the invasive cardiologist who is doing alcohol ablation, it is clear that the percutaneous approach is much easier and is successful in many patients who would be hard to enroll in a randomized trial. Thus, it appears obvious to us that alcohol ablation is the treatment of choice for the new century.

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REFERENCES


Figure 1. Treatment strategy in hypertrophic cardiomyopathy (HCM). ICD = implantable cardioverter-defibrillator; NSVT = nonsustained ventricular tachycardia.