

# Hypertrophic cardiomyopathy/treatment

## Pharmacological treatment

Asymptomatic patients or patients with very mild symptoms may not always require drug therapy.<sup>[1] [2]</sup> **Drugs with negative inotropic effects** are used, most often beta-blockers, calcium channel blockers (verapamil), or antiarrhythmics (disopyramide) with the aim of improving symptoms such as chest pain or symptoms related to obstruction of the outflow tract of the left ventricle.<sup>[3] [2]</sup> Diuretics are indicated in patients with advanced heart failure, however, caution should be exercised in terms of hypotension, hypovolemia and provocation of left ventricular outflow tract obstruction. They are indicated when systolic heart failure develops. ACE-inhibitors, spironolactone and other drugs.<sup>[2]</sup> Peripheral vasodilators, which have the effect of reducing afterload, are not recommended.<sup>[4]</sup> In patients with atrial fibrillation, anticoagulant treatment or cardioversion is indicated.<sup>[1]</sup>

## Treatment and prevention of arrhythmias and sudden death

Medical antiarrhythmic treatment consists of therapy with beta-blockers or amiodarone. **In higher-risk patients, the indication for an implantable cardioverter-defibrillator (ICD) is considered as part of primary or secondary prevention.**<sup>[3] [5]</sup> Stratification of patients at increased risk of sudden death is not always simple and is governed by a number of criteria. The indication for an ICD **as secondary prevention in people after cardiac arrest or persistent ventricular tachycardia** is clear.<sup>[3] [5]</sup> In the framework of primary prevention, the following criteria are considered to be indicative for the introduction of an ICD - family history of sudden death, history of syncope, numerous non-persistent ventricular tachycardia, hypotension, massive hypertrophy of the left ventricular myocardium (thickness over 30 mm in adults) and evidence of more extensive LGE.<sup>[3] [5]</sup> **Reduced left ventricular ejection fraction, apical aneurysm, significant subaortic resting gradient and multiple gene mutations of sarcomeric proteins** are considered as additional risk factors for sudden death.<sup>[3]</sup>

## Surgical and invasive treatment

The surgical solution involves **septal myectomy**, which is often combined with replacement of a dysfunctional mitral valve. An invasive solution is **percutaneous transluminal septal myocardial ablation (PTMSA)**. The indication criteria include the presence **of significant obstruction of the outflow tract of the left ventricle** and associated significant **symptomatology** of patients refractory to pharmacological treatment, significant mitral regurgitation and others.<sup>[1]</sup> Patients experience symptomatic relief as a result of a reduction in the gradient of obstruction, and a reduction in the risk of sudden death is also described.<sup>[6]</sup> The principle of alcohol ablation of the septum consists in **applying concentrated alcohol to the artery supplying the basal part of the septum**. This causes necrosis of part of the hypertrophied septum with subsequent scarring of the area, where the aspiration is the result of a decrease in the gradient of the obstruction and an improvement in the coaptation of the mitral valve leaflets.<sup>[3] [5] [6]</sup> Indications for either myectomy or alcohol septal ablation are governed by a number of criteria. A higher risk of developing AV blocks or other arrhythmias is documented in alcohol ablation of the septum.<sup>[3] [1]</sup>

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