Hypertrophic Cardiomyopathy Signs, Symptoms and Treatment

Hypertrophic cardiomyopathy is a familial disease leading to ventricular hypertrophy. It is a cause of sudden death in young athletes, and is typically asymptomatic until death, though patients are sometimes mildly symptomatic.



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Signs and Symptoms

Sudden Death Of Young Athlete
Death of Young Athlete
HCM is the leading cause of cardiac death in young athletes. Often, patients are asymptomatic until death, explaining the lack of prior intervention in a majority of these patients.

Heart Failure
Dead Heart
The most common presentation of hypertrophic cardiomyopathy is heart failure, manifesting in approximately 90% of symptomatic patients and resulting in exertional dyspnea from a variety of mechanisms.

Angina
Angel with Chest Pain-bolts
Approximately 30% of patients with hypertrophic cardiomyopathy (HCM) complain of typical/exertional chest pain, or angina, although some patients may also complain of atypical angina for prolonged periods.

Arrhythmias
Broken Arrhythmia-drum
Patients with hypertrophic cardiomyopathy (HCM) can present with a variety of supraventricular and ventricular cardiac arrhythmias including atrial fibrillation, supraventricular tachycardia, premature atrial and ventricular contractions and even ventricular tachycardia, potentially resulting in sudden cardiac death.

Syncope
Sink-of-peas fainting
Syncopal episodes are reported in approximately 20% of patients with hypertrophic cardiomyopathy (HCM), with another 20% indicating presyncopal episodes. These episodes may result from several mechanisms including arrhythmias, conduction abnormalities, ventricular outflow obstruction, myocardial ischemia and other causes.

Harsh Systolic Ejection Murmur
Harshly Squeezing-heart to Eject Merman
Patients with HCM display a harsh systolic ejection murmur. This murmur is intensified with maneuvers that decrease filling volume of the ventricles, such as valsalva. Activities such as sustained hand grip cause a decrease in the murmur intensity.

S4 Heart Sound
(S) Snake and (4) Fork Heart
A nonspecific finding on clinical exam of patients with hypertrophic cardiomyopathy is the presence of an S4 heart sound, which corresponds to atrial systole and is auscultated just prior to the first heart sound (S1).

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Treatment

Beta Blocker

Beta-fish with Blocks

Beta blockers are considered first-line agents to treat HCM. In patients with severe outflow obstruction, the heart rate must be slowed, which is why beta blockers are so helpful. Patients are also advised to stop high intensity activity.

Non-dihydropyridine Calcium Channel Blocker

Nun-dice-hydra-pyramid Blocking Calcium-cow at Channel

Verapamil, a non-dihydropyridine calcium channel blocker, can be used in patients with HCM who cannot tolerate beta-blockers.

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