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Hypertrophic Cardiomyopathy (HCM): How Flow Analysis May Drive Medical Management and Surgical Approach

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Hypertrophic Cardiomyopathy (HCM) is the most common inherited heart disease and occurs in 1 in 500 persons worldwide regardless of race, age and gender. It is the most common cause of sudden death in the young and also causes heart failure and cardiac arrhythmias. The primary anatomic abnormality is thickening of certain walls, or sometimes global thickening of the left or right ventricle. The patterns of thickening along with increased ventricular stiffness lead to suboptimal ventricular filling and inefficient ejection of blood from the ventricle. Treatment for HCM can be medical or surgical. The choice of therapy is driven by the presence and severity of outflow obstruction. Flow analysis could provide sophisticated information about outflow and inflow ventricular dynamics. These flow dynamics features may enable better medical choices and provide information that would allow superior surgical planning.

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