Research Progress in the Treatment of Hypertrophic Cardiomyopathy with Myocardial Protein Inhibitors

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Abstract

Background: Hypertrophic cardiomyopathy HCM is a common genetic cardiomyopathy, which is often caused by gene mutations encoding myocardial sarcomere proteins. Before the advent of myocardial protein inhibitors Mavacamten, percutaneous intervention and surgery were clinically used as treatment methods, while no oral drugs could change the disease process. Objective: To compare the benefits of different treatment options in patients with hypertrophic obstructive cardiomyopathy. Method: Patients with hypertrophic cardiomyopathy treated with Mavacamten were summarized from the EMBASE database, and patients treated with septal reduction therapy, septal myectomy or alcohol septal ablation were compared Left ventricular ejection fraction, changes in interventricular septal thickness, New York Heart Association (NYHA) heart function classification, and incidence of heart failure events were tracked to evaluate patient benefits. Result: Both Mavacamten and surgical treatment can effectively improve patient indicators and improve quality of life. Among them, surgical treatment can quickly benefit patients after surgery. After 16 weeks of drug treatment, 17.9% of patients still have surgical indications, but there is a probability of surgical failure and an unsatisfactory reduction in left ventricular outflow tract (LVOT) pressure gradient. Conclusion: Mavacamten can be used as an alternative treatment option for HCM surgery, alcohol septal ablation, and high-risk patients with contraindications to ablation. Long term Mavacamten targeted molecular therapy has greater benefits in treating HCM patients.

Keywords

Hypertrophic Cardiomyopathy, Mavacamten, Treatment