Targeting the Cause of Obstructive Hypertrophic Cardiomyopathy

The first drug targeting the underlying pathophysiology of obstructive hypertrophic cardiomyopathy (OHCM) gained FDA approval for patients with symptomatic New York Heart Association (NYHA) class II and III disease. OHCM thickens the cardiac septum, which can obstruct blood outflow. Mavacamten capsules, marketed as Camzyos by Bristol Myers Squibb, inhibit cardiac myosin, a protein that promotes cardiac muscle hypercontractility leading to septum thickening.

Previous OHCM drug therapies including β-blockers, non–dihydropyridine calcium channel blockers, and disopyramide are nonspecific and often insufficiently control OHCM symptoms. Invasive treatment with surgical myectomy or alcohol septal ablation relieves symptoms for patients with NYHA class III and IV OHCM, but it doesn’t address the underlying disease.

In a 30-week phase 3 clinical trial involving 251 patients with OHCM, 45, or 37%, of those who received mavacamten compared with 22, or 17%, in the placebo group reached the primary end point: a 1.5-mL/kg per minute or greater increase in peak oxygen consumption ($\dot{V}O_2$) and at least 1 NYHA class reduction, or a 3.0-mL/kg per min or greater $\dot{V}O_2$ increase without NYHA class worsening. Patients in the mavacamten group had greater improvements in symptom scores and postexercise left ventricular outflow tract gradient than those who received placebo. In addition, 34% more patients who received mavacamten improved at least 1 NYHA class than those in the placebo group.

A radiologic substudy involving 35 patients showed that mavacamten was associated with significant positive cardiac remodeling during the clinical trial.

Seven patients in the mavacamten group developed systolic dysfunction, which was reversible with washout. Because of the increased heart failure risk, mavacamten carries a boxed warning and requires prescriber certification, patient avoidance of drugs interfering with mavacamten metabolism, and ongoing echocardiogram monitoring.

Warning Against Counterfeit At-home COVID-19 Tests

As counterfeit over-the-counter at-home COVID-19 diagnostic tests turn up in the US, the FDA has warned clinicians and consumers against using or distributing them. Unauthorized tests can produce both false-negative and false-positive results, according to the FDA. A false-negative result that shows someone doesn’t have COVID-19 when they actually do could lead to delayed treatment or none at all, possibly causing more severe disease or death. False-negative results also could further the spread of SARS-CoV-2.

False-positive results that indicate a person has COVID-19 when they really do not can delay appropriate treatment for other diseases with similar symptoms, potentially leading to worse outcomes. False-positive results also may lead to further SARS-CoV-2 transmission when people presumed to be infected are housed together.

Some counterfeit tests may be obvious because of missing label information such as lot numbers and QR codes, misspelled or grammatically incorrect label text, and kit components that don’t match the content description. Product trade names printed on components or box labels also may differ from the authorized labeling found on the FDA website.

However, differences between counterfeit and authentic tests can be subtle. The FDA and test manufacturers have provided information to help consumers discern between authorized and counterfeit COVID-19 tests.

Counterfeit tests should be reported to the authorized test’s manufacturer and the FDA using the MedWatch Online Voluntary Reporting Form.

Ventricular Assist Device May Be Faulty

A welding defect in Medtronic’s Heartware Ventricular Assist Device System has been linked with 3 cases of suspected pump thrombosis, according to an FDA warning. Medtronic also issued an Urgent Medical Device Correction letter alerting physicians and health care professionals of its investigation into 3 pumps that had malfunctioned, possibly due to a weld defect that allowed moisture into the pump assembly. The company will issue findings as they become known.

The 3 patients presented with at least 1 sign or symptom of pump failure. These included grinding sounds, transient power spikes on pump log files and high-watt alarms, elevated lactate dehydrogenase, low motor speed resulting in low perfusion, and dizziness or lightheadedness. All 3 patients underwent pump exchanges. One died 3 weeks after the exchange. Another died a month after a heart transplant that took place 2 months after the pump exchange.

If patients have any of these signs or symptoms, clinicians should immediately submit all pump .csv log files from the controller as described in Medtronic’s device correction letter.

The FDA doesn’t recommend elective removal of properly functioning pump systems. Instead, patients with signs or symptoms of pump thrombosis should receive treatment. If symptoms do not resolve, clinicians should consider whether the patient is a candidate for pump exchange, heart transplant, or pump explant for recovery. — Howard D. Larkin

Note: Source references are available through embedded hyperlinks in the article text online.