FDA Scrutinizes Ulitmate Failure for Heart Failure

BY JESSICA BYLANDER

GAITHERSBURG, Md. — Randomized clinical trials are needed to allow blood filtration devices to be labeled for heart failure treatment, a Food and Drug Administration advisory panel said. The trials should include 1-year patient follow-up to demonstrate the safety and efficacy of blood filtration to treat acute decompensated heart failure by removing excess body fluid, the FDA’s gastroenterology and urology devices panel recommended.

Primary end points should include safety, quality of life, and rehospitalization, while mortality should be a secondary end point, the advisory panel recommended.

Triple therapy is a promising new treatment for the disease, most likely as a second-line therapy, panel chair Dr. Clyde Yancy, medical director of the Baylor Heart and Vascular Institute at Baylor University in Dallas, said at the meeting. However, “we need more data; we need new data; we need prospective data for any device to get a heart failure label. We’re not there yet,” he said.

The panel agreed that there is a need for new heart failure treatments, but “you do need comparative data” in order to put the therapy “in the context of available strategies,” said panelist Dr. Jefrey Borer, chief of cardiovascular medicine at the State University of New York’s Downstate Medical Center in Brooklyn.

Fluid overload is a symptom of a variety of conditions, the FDA noted, including chronic obstructive pulmonary disease, kidney failure, and liver failure. The agency has cleared several devices and accessories to achieve fluid removal through blood ultrafiltration, a process that removes water excess and solutes, without a patient’s blood. But the FDA has not yet reviewed such products for disease- or population-specific indications.

Ultrafiltration products—including dialysis systems and components—generally are cleared for marketing as class II devices, supported by technical data, bench studies, and the occasional clinical trial, according to the FDA. However, the agency asked the panel to define what level of clinical evidence would be necessary to allow heart failure labeling for ultrafiltration devices, having noted an increase in research and promotion of ultrafiltration for treating the condition.

The largest trial to date on the treatment is the Ultrafiltration vs IV Diuretics for Patients with Acute Decompensated Congestive Heart Failure (UNLOAD) trial, reported in 2006. It showed greater weight and fluid loss and reduced rehospitalizations with ultrafiltration, compared with treatment with loop diuretics, but not greater symptom relief.

There is no standard for the amount of fluid removal necessary to achieve positive outcomes, even with diuretic drugs, which are the current standard care for medical management of fluid overload. The FDA said that there are no data from randomized controlled studies demonstrating ultrafiltration is safe and effective for first-line therapy in the treatment of heart failure.

Continuous renal replacement therapy and conventional dialysis systems that can perform ultrafiltration are available from several manufacturers. Only one system has been cleared as an isolated ultrafiltration system—CHF Solutions’ Aquadex Flowflex. Isolated ultrafiltration systems are simpler and more portable, though less versatile, the FDA noted.

Unlike the other products, however, Aquadex is indicated for treating fluid overload in patients who have failed diuretic therapy.

Jessica Bylander is a reporter for The Gray Sheet. This newspaper and The Gray Sheet are published by Eliverre. Catherine Hackett contributed to this report.