Weight Loss Before AFib Ablation Procedure Results in Improved Outcomes Among Obese Patients

Researchers with UHealth – University of Miami Health System and the Miller School of Medicine presented results from a new clinical trial that found overweight and obese patients with persistent and paroxysmal atrial fibrillation (AF) who lose weight prior to a catheter ablation procedure have improved clinical outcomes.

Jeffrey Goldberger, M.D., presents results from the LEAF Study at the 2023 Heart Rhythm Society meeting.

The study, titled “Pre-ablation Weight Loss as a Predictor of Atrial Fibrillation Ablation Outcome in the Liraglutide Effect on Atrial Fibrillation (LEAF) Study,” identifies weight loss before undergoing an ablation procedure as a risk factor reduction tool for AF patients. Findings were presented as part of the late-breaking clinical trials at the Heart Rhythm Society’s 2023 annual meeting, held May 19-21 in New Orleans.

“We are constantly evolving our approach to AF to identify new ways to prevent recurrence and improve long-term outcomes,” said Jeffrey Goldberger, M.D., M.B.A, director, Center for Atrial Fibrillation and professor of medicine and biomedical engineering at UHealth and the Miller School. “While we
already know the impact weight can have on overall outcomes, we believe the magnitude of the effect during this study is quite striking and that the findings show that even moderate weight loss may lead to a positive effect, but further analysis incorporating the potential independent contribution of Liraglutide is necessary.

“We hope that our findings will encourage physicians to integrate weight loss and risk factor modification into their treatment plans for patients undergoing catheter ablation and drive even more research dedicated to finding additional supportive solutions for patients living with AF,” Dr. Goldberger said.

Most Common Type of Arrhythmia

AF is the most common type of arrhythmia. There are approximately 2.3 million people in the United States who have AF, with 160,000 new cases diagnosed every year. Catheter ablation is a frequently used treatment for people with arrhythmias that can’t be controlled by medication, or with certain types of arrhythmias from the heart’s upper chambers.

“We hope that our findings will encourage physicians to integrate weight loss and risk factor modification into their treatment plans for patients undergoing catheter ablation,” Dr. Goldberger said.

While catheter ablation is a common AF treatment option,
researchers are continuously evaluating how to improve AF ablation patient outcomes. This trial sought to determine whether additional non-ablation therapy targets can be integrated into treatment plans for patients undergoing catheter ablation for persistent AF and paroxysmal AF.

In the study, 65 patients with BMI of 27 kg/m2 or more who opted for catheter ablation to treat AF were enrolled and randomized to a three-month pre-ablation period of standard risk factor modification (RFM) or RFM plus Liraglutide.

From the enrolled participants, there were 59 patients (age 62±9 years, 27% female) weighing 106.4±18.5 kg (BMI 36.1±5.8 kg/m2); 79% had persistent AF and 21% had paroxysmal AF, with 85% having hypertension, 27% diabetes, and 44% obstructive sleep apnea. Patients with a <3% weight change prior to their ablation procedure were labeled as Group 1 and patients with a weight change of 3-10% or more were classified as Group 2.

The results showed AF status from enrollment to six months post-ablation. Group 1 had 29 patients with 0.2±2.7% weight gain and Group 2 had 30 patients with 5.6±1.8% weight loss. Freedom from AF off antiarrhythmic drugs at six months was 61% in Group 1 versus 88% in Group 2 (Fisher’s Test p=0.046, OLR p=0.0431). For patients with persistent AF treated with ablation (including one whose AF resolved with weight loss), freedom from AF off antiarrhythmic drugs at six months was 61% in Group 1 versus 90% in Group 2 (Fisher’s Test p=0.058, OLR p=0.051) and at 12 months was 42% in Group 1 versus 81% in Group 2 (Fisher’s Test p=0.050, OLR p=0.038).

Authors of this trial would like to see additional trials focused on assessing the role of weight and weight loss in improving AF ablation outcomes and potentially identifying
novel procedural approaches.

The society's annual Heart Rhythm meeting is the premier EP event every year and brings together the largest gathering of heart rhythm professionals from around the world to exchange groundbreaking science, cutting-edge technologies and lifesaving therapies to improve the care of arrhythmia patients.

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