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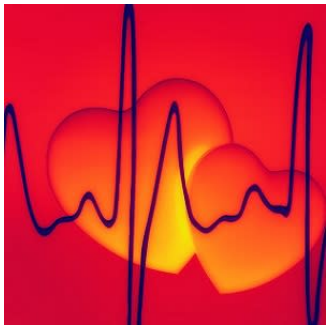
Catheter ablation better than drugs for treating AF



The findings of the eight-year CASTLE-AF clinical trial provide strong data on the safety and efficacy of catheter ablation in treating atrial fibrillation (AF), which can cause heart failure. The trial showed radiofrequency catheter ablation lowered hospitalisation and mortality rates by 47 and 44 percent, respectively, in AF patients.

The study, led by researchers from the University of Utah Health and Klinikum Coburg (Germany), compared catheter ablation to conventional drug therapies recommended by the American Heart Association and European Heart Society to control the heart's rate. Until now, no clinical studies have been conducted that support one definitive treatment for AF.

Special heart cells create electrical signals that cause the heart's upper and lower chambers to beat in the proper sequence to pump blood through the body. Abnormal cells can cause the heart to beat faster or irregularly, resulting in AF.

During the ablation process, a catheter is snaked through the patient's body to the site of abnormal heart cells. The doctor delivers a dose of radiofrequency energy, similar to microwaves, to destroy the abnormal cells, which restores the heart's regular rhythm.

After evaluating more than 3,000 patients from North America, Europe and Australia, researchers selected 363 participants with temporary or persistent AF and heart failure, characterised by heart function at less than 35 percent capacity, for the clinical trial. The patients were separated into two groups, receiving either radiofrequency catheter ablation (179) or a conventional drug therapy (184).

The trial's end point was set at all-cause mortality and worsening of heart failure, resulting in an unplanned overnight hospitalisation. Patients in the ablation group experienced lower overall mortality (28%; 51/179) compared to the medication group (46%; 82/184). In addition, catheter ablation resulted in lower cardiovascular mortality (13%; 24/179) compared to the medication group (25%; 46/184).

"None of the traditional drug therapies are improving the patient's condition, a major medical dilemma when we see these patients in our clinics," said Nassir F. Marrouche, MD, professor in Internal Medicine and Executive Director of the Comprehensive Arrhythmia Research and Management (CARMA) Center at U of U Health. "This clinical trial is the first time we can show with hard data that ablation is saving more lives than arrhythmia medications."

The procedure also helps reduce the cost of treating patients by keeping them out of hospital due to lower incidence of worsening heart failure, Dr. Marrouche added.

All of the participants included in the CASTLE-AF trial had previously received an implantable cardioverter defibrillator (ICD), which allowed for continuous monitoring of heart rate. The ICD may have improved mortality, which Dr. Marrouche believes is the primary limitation in this study that may have affected death rates in both groups.

The study's findings were presented at the European Society of Cardiology conference held in Barcelona, Spain.

Source: University of Utah Health
Image Credit: Pixabay

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