

JEFF MARTIN of Tustin, California

Innovative medical technology prevents stroke and restores quality of life



A SUDDEN ONSET

Three million Americans suffer from a little-known condition called atrial fibrillation, or afib, making it the most common form of heart rhythm disorder in the U.S., according to the Heart Rhythm Society. For Jeff, a long-time employee in the medical technology industry, the disease revealed itself during a day trip to a local beach, when he suddenly felt light-headed and short of breath with a noticeable fluttering feeling in his chest.

A PROGRESSIVE DISEASE

Over the next several months the condition worsened, until he underwent a minimally invasive procedure called catheter ablation. Catheter ablation utilizes a combination of innovative medical devices that help block faulty electrical impulses causing arrhythmias.

“I was out of the hospital in two days and back to doing the things I loved within one month”

Afib is primarily a disease of the aging population, with approximately 70 percent of people affected between the ages of 65 and 85. However, the condition can affect people of any age. “I was quite surprised to learn I had a heart condition at my age. I was always very active and surfing most days of the week,” Jeff says. “I had never been to the hospital for anything more than stitches due to being a very active rugby player so the whole thing was a whirlwind. I was just kind of perplexed as to how this could have happened.” Prevalence of the condition is projected to increase significantly as the population ages, and in the next 30-40 years, the number of people diagnosed in the U.S. is expected to more than double.

Afib affects the upper chambers of the heart, or atria, causing the chambers to beat rapidly and in an uncontrolled manner. This irregular beating affects blood flow and some patients experience a “fluttering” feeling in the chest, in addition to chest pain. Afib is a progressive disease, which means that if left untreated, fatigue, congestive heart failure and even stroke can result. The condition can also have a significant negative impact on an individual’s quality of life in terms of physical, psychological, emotional and social functioning.

ADVANCED TREATMENT OPTIONS

However, thanks to advances in medical technology, there are now many treatment options available to patients with afib and high levels of success. In fact, studies show that people who undergo catheter ablation have a risk of stroke that is less than half that of patients on medications alone, and risk of death from stroke that is roughly one-quarter.



WORSENING SYMPTOMS

Within weeks following the initial event at the beach, Jeff's symptoms worsened. He felt light-headed, had no energy and was unable to exercise. Jeff had always lived an active lifestyle: playing rugby and surfing in his free time. When his symptoms were affecting the hobbies he loved, he sought out the expertise of a heart specialist. "My symptoms really started affecting my quality of life, so I had to go to the hospital, which is where I first learned that I had atrial fibrillation," Jeff says.

A NEW PATH

In parallel, the Air Force veteran and engineer by education was looking to make a career change in the medical technology industry, an industry he had been working in for eight years. Ironically, he was offered a job opportunity with a medical device company specializing in catheter ablation technology for afib and other heart disorders. "Being an engineer and working with complex products in the medical technology industry is extremely rewarding to me... little did I know I would be affected personally," Jeff says. "I accepted the job, I figured, what better way to learn about the condition from which I suffered?"

Within six months of joining the new company, Jeff had the catheter ablation procedure. During the procedure, a therapeutic catheter is inserted through a small incision in the groin and weaved up to the heart through a blood vessel in the leg. Once the catheter reaches the upper left chamber of the heart, advanced 3D imaging is utilized to assist doctors in applying controlled levels of radiofrequency energy around each of the openings of the pulmonary veins. The catheter is then removed and a small bandage is applied to the area where the catheter was inserted.

DISEASE & TREATMENT

According to the American Heart Association, an estimated 2.7 million people are living with Atrial Fibrillation, or AFib.¹

AFib is a quivering or irregular heartbeat (arrhythmia) that can lead to blood clots, stroke, heart failure and other heart-related complications.²

AFib is the most common serious heart rhythm abnormality in people over the age of 65 years, however it can affect people of any age. If left untreated, AFib doubles the risk of heart-related deaths and causes a 4–5-fold increased risk for stroke.³

Advancements in medical technology have contributed to more effective treatments for patients with AFib.

Research has shown that catheter ablation can be more effective than medication in controlling the disease. In one study, sixty-six percent of AFib patients who underwent catheter ablation were cured within one year.⁴

GETTING BACK TO LIVING

"I was out of the hospital in two days and back to doing the things I loved within one month," Jeff says. "The great thing about advanced technologies is that they are reducing the complexities of these procedures, reducing hospital stays and the need for follow-up procedures. Before the advent of catheter ablation, this procedure would have required invasive, open heart surgery, where today, it is minimally invasive."

Jeff has been afib-free for over two years and is back to his active and healthy lifestyle thanks to medical technology. "I truly believe in our product, and feel lucky that I work in this industry," Jeff says. "Having a mission that I feel is a benefit to society is my calling and my passion."

1. American Heart Association: What is Atrial Fibrillation (AFib or AF)? Retrieved September 9, 2014, from: http://www.heart.org/HEARTORG/Conditions/Arrhythmia/AboutArrhythmia/What-is-Atrial-Fibrillation-AFib-or-AF_UCM_423748_Article.jsp.

2. Ibid

3. Ibid

4. Wilber DJ, Pappone C, Neuzil P, et al. Comparison of Antiarrhythmic Drug Therapy and Radiofrequency Catheter Ablation in Patients With Paroxysmal Atrial Fibrillation: A Randomized Controlled Trial. JAMA. 2010;303(4):333-340. doi:10.1001/jama.2009.2029.