

Cryoablation used to successfully treat atrial fibrillation at the Montreal Heart Institute

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The electrophysiology team at the Montreal Heart Institute (MHI) used cryoablation (ablation using cold) to treat a patient suffering from atrial fibrillation, the most common form of cardiac arrhythmia, and one associated with significant morbidity. The procedure was performed by Dr. Peter Guerra, Chief of Electrophysiology, and Dr. Marc Dubuc, cardiologist and specialist in electrophysiology. This was a first in Canada following the approval of the Arctic Front device by Health Canada.

A Canadian technique using cold as a new form of energy

The patient, a 71 year old man, had suffered from arrhythmia for a number of years, and medications had been ineffective, so a [catheter](#) procedure was therefore necessary. He responded favourably to the procedure.

The Arctic Front device was developed in Montreal and is manufactured by Medtronic. Using this new tool, the Montreal Heart Institute [cardiologists](#) can treat the patient more quickly and efficiently, compared to the traditional heat ablation. As a result, the risks of complication associated with this treatment, including the risk of recurrence is reduced significantly.

"Cryoballoon technology is a major improvement over the traditional approach for the treatment of atrial fibrillation," said Dr. Dubuc, who is

also an associate professor of Medicine at the Université de Montréal. "The delivery of circumferential lesions around the pulmonary veins reduces the duration of the procedure while being effective and safe for the patient."

A technology developed at the Montreal Heart Institute

The STOP AF (Sustained Treatment of Paroxysmal Atrial Fibrillation) study, demonstrated the safety and efficacy of the Arctic Front device in treating and eradicating paroxysmal atrial fibrillation. "We are pleased with the success we obtained using cryoablation in the North American trial STOP AF and our patients have done extremely well. Now, at last, we can offer this technology to all our patients," said Dr. Guerra, who is assistant professor of Medicine at the Université de Montréal and who was lead investigator at the Montreal Heart Institute for the STOP AF trial. "Since cryoablation was pioneered by my colleague, Marc Dubuc, and our Research Center, we are obviously anxious to move forward with this new tool."

The STOP AF trial showed that 69.9% of patients treated with Arctic Front were free from atrial fibrillation at one year, compared to 7.3% of patients treated with drug therapy only. The study also demonstrated that treatment with the device is safe, with limited procedure-related adverse events (3.1%), and patients enrolled in the study displayed a significant reduction of symptoms, a decrease in the use of drug therapy and substantial improvements in both physical and mental quality-of-life factors.

A cardiac disease that affects one person in 20

It is estimated that one person in 20 will suffer from atrial fibrillation in

his/her lifetime. In Canada, roughly 250,000 persons suffer from this form of arrhythmia. The main symptoms of atrial fibrillation are palpitations, dizziness and shortness of breath. The heart begins to beat very quickly, irregularly and unpredictably. Its effect is to weaken the heart and promote the formation of blood clots that can cause a stroke as well as peripheral embolism. Up to ten years ago, [atrial fibrillation](#) was treated only with medications, but since 1997, radiofrequency [ablation](#) using heat has been used in patients who did not respond to conventional treatment with pills.

Provided by Montreal Heart Institute

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