

American Heart Association Conference Reveals Impressive Results Using Magnetic Fields and Atrial Fibrillation

Seeing significant reduction in duration of Atrial Fibrillation


CLEARWATER, FL, US, April 10, 2020 /EINPresswire.com/ -- The American Heart Association recently held their "Scientific Sessions" conference in Philadelphia and one of the Posters featured displayed the exciting results of a study involving the Magnesphere and Atrial Fibrillation as conducted by the University of Oklahoma's Heart Rhythm Institute and Augusta University Medical College of Georgia. The research team was studying the effect of using a low-level electro-magnetic field (LL-EMF) to reduce the duration of Atrial Fibrillation (AF) while patients were undergoing an ablation procedure. AF is one of the most common heart conditions treated in a clinical setting.

[Magneceutical Health](#) provided a custom-built Magnesphere for the study (one that could be used during a surgery). One group received LL-EMF stimulation from the Magnesphere for 60 minutes and a control group was positioned in the Magnesphere as if they were being treated but received no LL-EMF stimulation. Both groups then received a stimulus that would normally induce AF, and were carefully monitored to measure the outcome.

The results were very impressive and validated the hypothesis that LL-EMF may help reduce the duration of AF. Their finding was that "LL-EMF application resulted in a statistically significant reduction in pacing induced AF duration after 60 minutes of stimulation as compared to sham stimulation." Importantly "fewer patients in the LL-EMF group required cardioversion after the 60-minute period (1/7 vs. 5/6)". The findings also noted: "There were no adverse events related to the study device."

The Institutions supporting this Study are encouraged by the results and are actively working on further research involving larger studies to confirm the application of LL-EMF in treating heart disease.

Follow these links for the abstract of the research at AHAJournals.org or view the [poster](#) presented at the conference.



**AUGUSTA UNIVERSITY
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Low-Level Electromagnetic Fields Attenuate the Induc
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INTRODUCTION

- Atrial fibrillation (AF) remains the most common sustained dysrhythmia encountered in clinical practice
- Current therapies aimed at rhythm control have disappointing efficacy at long-term sinus rhythm maintenance. Further, anti-arrhythmic drug therapy and catheter ablation have a number of associated side effects and risks
- Autonomic nervous system (ANS) remodeling contributes to AF pathogenesis in multiple ways, and recent studies have suggested that autonomic modulation may be an effective therapy for AF, with a variety of modalities under investigation
- The purpose of this study was to examine the effect of low-level electromagnetic field (LL-EMF) stimulation as a method of autonomic stimulation and AF suppression

METHODS

- Population:** Paroxysmal AF patients, age 18-85
- Exclusion criteria:** Valvular AF, persistent AF, left ventricular systolic dysfunction, prior ablation
- Study design:** Randomized, sham-controlled, double blinded.
 - Active group: Pulsed LL-EMF (0.032 µG at 0.89 Hz) via a Helmholtz coil placed around the head and neck (Figure 1)
 - Sham group: Patient was positioned in the study device, but no stimulation was applied
- Following initial EP study, AF was induced by burst atrial pacing from the right atrial appendage [pacing cycle length (CL) 250-200 ms or the shortest CL that captured 1:1]. DC cardioversion was performed if AF lasted longer than 15 minutes
- Following this, the stimulation protocol (active or sham) was turned on for 60 minutes. During this time, trans-septal access and mapping were performed, but no ablation occurred
- After 60 minutes, repeat AF induction occurred, again noting duration of induced-AF
- Primary endpoint:** Change in duration of pacing-induced AF

RESULTS

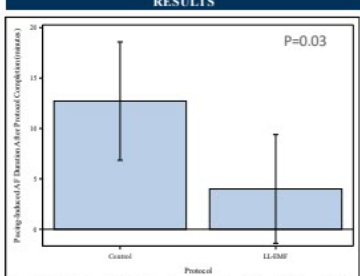


Figure 2. Pacing-induced AF duration after study protocol – sham (left) vs. active (right)




Figure 1. Study device

	Control n=7	Sham n=7	P-value
Age (years)	60 (56-63)	60 (56-65)	0.71
Sex	25.6 (27-30)	28.0 (26.3-36)	0.90
Male	3 (0.5)	3 (0.4)	>0.9
Time from diagnosis (months)	36 (24-52)	24 (2-48)	0.62
Ischemic	3 (0.5)	4 (0.57)	>0.9
Diabetes	1 (0.17)	3 (0.42)	0.56
Coronary Disease	0 (0)	1 (0.14)	>0.9
Obstructive Sleep Apnea	3 (0.5)	3 (0.4)	>0.9
Electrolyte Imbalance	5 (0.5-6)	5 (0.5-6)	0.83
Antiarrhythmic Drugs	2 (0.2)	2 (0.2)	0.22
Beta-Blocker	3 (0.5)	4 (0.57)	0.46
ACCUAB	0 (0)	2 (0.2)	0.49
Antiarrhythmia	0 (0)	2 (0.2)	0.46
Other AAD	2 (0.3)	5 (0.7)	0.29
Left Atrial Size (cm)	4.37 (4.28-4.5)	3.9 (3.35-5.4)	0.95
Left Ventricular Septal Thickness (mm)	1.1 (1.1-1.1)	1.1 (1.05-1.1)	0.96
Cardioversion/ablation	3 (0.5)	4 (0.57)	>0.9

Table 1. Baseline characteristics
*Data presented as median (range) for the majority of cases (groupings) as appropriate.

American Heart Association Summary

About Magneceutical Health - The Magneceutical Health team creates products to help people manage chronic stress, and its detrimental impact on their health.

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