**ELECTROCAUTERY INDUCED ATRIAL FIBRILLATION - WHAT IS THE MECHANISM?**

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*Introduction:*Electrocautery (EC) is known to cause electromagnetic interference. We report a rare case of EC induced atrial fibrillation (AF).

*Methods:*NA

*Results:* A 63 year old man with a dual chamber pacemaker for Mobitz type II 2nd-degree AV block was referred for a BiV ICD upgrade for non-ischemic cardiomyopathy and left bundle branch block (EF 30%). He had a Boston Scientific pacemaker (Altrua 60TM pacing system - Boston Scientific, Inc.) implanted 4 years ago. The right atrial lead was a 1288TC (Tendril™ STS Lead - St. Jude Medical, Inc) lead. A CS catheter was inserted to guide LV lead position. During exposure of the pacemaker pocket, EC was used for hemostasis. During the second application of EC, patient went into AF. Review of CS electrograms was suggestive of EC induced AF (Figure). As AF persisted even after EC was stopped and there was a concern for right atrial lead malfunction, we proceeded with direct current cardioversion with restoration of atrial paced rhythm. Interrogation of the right atrial lead did not show evidence of insulation breach (Impedance 360Ω). Rest of the procedure was uncomplicated and successful.

*Conclusions:* Previous cases of EC induced VT and VF have been reported. To the best of our knowledge, this is the first reported case of EC induced AF. Myocardial stimulation with direct application of EC on the pulse generator, connector or the lead is the most likely cause. Minimal power settings, distant grounding patch placement and immediate access to external cardioverters-defibrillators are crucial to manage EC induced arrhythmias.

