

International Conference on

Medical Devices

September 21-22, 2015 Orlando, USA

Atrial flutter following radiofrequency and high intensity focused ultrasound left atrial ablative procedures

Ahmed El-Damaty

Cairo University School of Medicine, Egypt

Introduction: The incidence of atrogenic atrial tachyarrhythmias has been increasing with the widespread practice of LA ablative procedures to treat AF. Slow conduction over gaps resulting from recovery of conduction in previously performed ablation lines is the most likely substrate for these flutter circuits.

Patients & Methods: Case1: A 62 year old male presented with syncope and found to be in a typical atrial flutter with a rapid ventricular response few months after CPVI. During EP study his flutter CL was 200 ms. An activation map of the LA was created with 3D mapping. The whole flutter circuit was mapped around atrial side of the ablation line encircling the left superior vein with entry into the ablated segment at the anterior inferior margin of the LSPV, conduction across the LSPV, and exit again at the high posterior LSPV. Entrainment from pulmonary vein demonstrated concealed fusion with a PPI that matched the tachycardia CL. A single RF application at the exit site of the flutter circuit terminated the flutter. Further RF was delivered at the entrance site, isolating the vein. Case2: A 67 year old male presented with palpitations 18 months after CABG and HIFU en-bloc pulmonary vein isolation for PAF. He was in a typical atrial flutter. During EP study, his flutter CL was 355 ms. Flutter terminated during the transeptal procedure and was not inducible afterwards. Two gaps were detected in the line of double potentials surrounding the posterior LA and the 4 pulmonary veins. RF application at these 2 spots resulted in entrance block to the whole posterior LA and the 4 PVs. Pacing in the posterior LA captured the local atrial myocardium with exit block to the rest of the atrium. Dissociated activity in the posterior LA was noted. Flutter remained non-inducible.

Discussion: In both cases, electro-physiologic mapping strongly suggested re-entry mediated by entrance and exit from the previously isolated area. Post RF PVI, gaps that we described matched gaps in similar reports namely on the ridge between the LAA and the LSPV. HIFU circumferential ablation is an emerging technique and the electro-physiologic properties of left atrial arrhythmias following this procedure has not been reported yet.

Ahmed.damaty@kasralainy.edu.eg

Notes: