PREVALENCE OF PERI-PROCEDURAL PULMONARY EDEMA IN PATIENTS WITH AND WITHOUT HEART FAILURE UNDERGOING ATRIAL FIBRILLATION ABLATION: THE IMPORTANCE OF THE OPTIVOL INDEX IN PREDICTING PERI-PROCEDURAL EVENTS

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Background: ICD with resynchronization therapy can provide information on the intrathoracic fluid status of the pts by measuring transpulmonary electric bioimpedance.

Methods: Out of 2185 consecutive pts undergoing catheter ablation for AF with an open irrigated catheter, 132 (6%) had heart failure (HF). CRT-D Optivol Medtronic device was already implanted in 86 of the 132 HF pts; all pts were on optimal medical therapy. Before the procedure all the devices were interrogated and fluid accumulation status was assessed through intrathoracic impedance measurements (OptiVol fluid index (OFI)). All pts were monitored for developing peri-procedural pulmonary edema (PPE). PPE was defined as any event occurring during or within 24 hours from the procedure.

Results: When compared to pts without HF, a significantly higher incidence of PPE was reported among pts with HF [4/2053(0.2%) vs. 8/132(6.1%), p<.001]. All 86 pts with the Optivol device were in stable condition before the procedure. Baseline OFI level was within normal threshold in 72 (84%), between 30-50Ω in 8(9%), and above 50Ω in 6(7%) pts. Despite aggressive diuresis therapy, PPE was reported in 1of the 8 pts with OFI 30-50Ω range and in 5 of the 6 pts with OFI >50 Ω. None of the 72 pts with OFI within the normal value experienced PPE.

Conclusion: The risk of PPE during ablation for AF with open irrigated catheter is higher in heart failure pts. Pre-procedural assessment of fluid status with OFI could be helpful in reducing the complication.