

Incessant Focal Atrial Tachycardia: ECG and EP Characterization and Occurrence of Cardiomyopathy

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BACKGROUND: Incessant focal atrial tachycardia(AT) is rare but may be complicated by left ventricle dysfunction. The aim was to characterize the electrophysiological features of incessant focal AT and identify predictors of tachycardia mediated cardiomyopathy (TCM).

METHODS: 82 of 345(24%)patients with focal AT presenting for RFA between 1997-2008 were incessant. Patients characteristics, anatomic site of origin, and tachycardia characteristics of incessant pts were analysed.

RESULTS: Mean age was 42 ± 20 y and 57% pts were male. Mean symptom duration was 5 ± 7 y having failed a mean 1.5 ± 1.3 AADs. TCM (EF <50%) was present in 30/82(37%). Patients with incessant AT and TCM were younger (mean 39 ± 22 y v 45 ± 18 y $p=0.02$); have a slower tachycardia cycle length(TCL) ($502\text{ms}\pm 131$ v $446\text{ms}\pm 106$ $p=0.05$) and mean HR in tachycardia ($117\text{bpm}\pm 21$ v $132\text{bpm}\pm 33$ $p=0.05$) than incessant pts without TCM (table). Incessant tachycardia was more frequent from atrial appendage(AA, 84%) and pulmonary veins(PV, 59%) compared to other locations (combined,15%) ($p<0.001$)(Fig 1). AA and PV sites were associated with a higher incidence of TCM (AA:42%pts; PV:18%pts; other:6%, $p=0.008$). RFA was successful in 76/82(93%) pts. Recovery of LV function occurred in 29/30(97%) pts at mean of 3 months.

CONCLUSION Incessant tachycardia is complicated by TCM in 37% pts. Atrial appendage and pulmonary vein foci were more likely to be incessant and complicated by TCM. Incessant tachycardia and TCM was characterized by a slower TCL and mean heart rate than pts with non incessant AT. Slower AT may result in fewer/absent symptoms, possibly delaying clinical presentation and diagnosis.