A Case of Macro Reentrant Atrial Tachycardia around the Coronary Sinus in a Patient with Cardiac Surgery

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A 38-year-old man with a previous cardiac surgery for pulmonary artery stenosis twenty years prior felt frequent palpitations on effort for the last ten years. His 12-lead electrocardiogram demonstrated a narrow QRS tachycardia with a P-wave morphology that was negative in the inferior leads and positive in lead V1. During the electrophysiological study, activation mapping (CARTOR system) revealed a common atrial flutter (AFL) around the tricuspid annulus (TA). A linear ablation of the cavo-tricuspid isthmus was performed with an irrigated-tip ablation catheter. The AFL terminated after the linear catheter ablation of the cavo-tricuspid isthmus creating bidirectional conduction block. However, with burst pacing from the TA, another atrial tachycardia (AT) (TCL 220 msec) was induced. Delayed potentials (DPs) were recorded at the superior margin of the coronary sinus ostium (CSos), and DPs and fragmented potentials were recorded at the posterior region of the CSos. We diagnosed it as a macroreentrant atrial tachycardia around the CS. Linear ablation of the DPs-TA region and a sequential point-by-point ablation of the fragmented potentials in the DPs-CSos region was performed. During the ablation at the site of the fragmented potentials on the posterior aspect of the CSos, the AT terminated. We reported a case of a macroreentrant AT around the CSos.

Keywords: AT, AFL, ablation