Atrial tachycardias (ATs) are commonly developed after atrial fibrillation (AF) ablation. This study sought to develop method to facilitate localization of successful ablation regions based on electrograms from simultaneous mapping of right atrium (RA) and coronary sinus (CS).

**Method:** A steerable 20-pole catheter was positioned with the distal (D) 10 electrodes placed within CS and the proximal (P) 10 electrodes located along the tricuspid annulus in the RA. A decapolar catheter was positioned at the high RA (HRA) to septum.

**Results:** Total 30ATs per 28 patients were analyzed and categorized into 6 groups with different anatomical locations of ATs; 7 at mitral annulus (MA), 6 at left atrium (LA) roof, 6 at LA septum, 4 at LA anterior line, 4 at RA septum, 3 at RA free wall (FW).

Activation pattern of CS was from D to P in 6 (85.7%) ATs from MA, LA roof ATs had similar activation to those of LA septum but CS P was later than HRA septum. ATs of RA septum showed similar to LA septum and roof of LA, but HRA septum was earlier than CS P. The RA FW ATs had similar to CTI dependent RA flutter but terminated during ablation at crista terminalis.

**Conclusion:** Simultaneous assessment of RA septum and CS activation pattern from two multi-electrode catheters facilitated to map ATs developed after AF ablation.

**Keywords:** atrial tachycardia, activation sequence, post-AF ablation