Usefulness of High-Resolution Mapping in Detecting Localized Reentry Circuits of Atrial Tachycardia

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Introduction: A case was 82 years-old female. We decided to perform catheter ablation for atrial tachycardia (AT).

Methods: AT was easily induced by atrial burst pacing (AT1). We got activation mapping of AT1 using the Advisor HD Grid Mapping Catheter with Ensite system.

Result: The activation mapping detecting centrifugal activation pattern with the earliest activation point at anterior left atrium (LA), however, sparkle mapping revealed localized reentry circuit at anterior LA. Energy application targeting fragmented potential could terminate AT1. Because she had history of paroxysmal atrial fibrillation (AF), we performed pulmonary vein (PV) isolation. After PV isolation, AT2 was induced by atrial burst pacing. AT2 could not influenced by a liner ablation of LA roof and a liner ablation between right superior PV and mitral valve. Re-mapping of AT2 revealed localized reentry circuit at infero-lateral LA. Energy application targeting fragmented potential could terminate AT2. Neither AT nor AF could be induced after catheter ablation.

Conclusion: We reported a rare case of the patient with two different localized reentry circuits. High-resolution mapping was useful for detecting localized reentry circuits.