RF ablation of WPW syndrome using Ensite Array balloon mapping and Hansen-Sensei robotic Cool-path catheter

Figure 1. Main monitor of Hansen-Sensei software, and under fluoroscopy, Ensite Array balloon in the right atrium, 10 poled catheter in Coronary Sinus, and an ablation catheter at the tip of the Remote Navigation System, Virtual Catheter

Figure 2. Coronary sinus imaging

Wolff-Parkinson-White syndromes (WPW) are examples of preexcitation that affects approximately 0.15-0.2% of the general population (2). Of these individuals, 60-70% has no other heart disease, men are affected more often and typically, those affected are young, or healthy individuals. Death from WPW is secondary to the associated arrhythmias or mis-treatment of them. RF ablation remains the first line therapy in symptomatic WPW patients.

A 22-year-old woman with known preexcitation, WPW was diagnosed at age of 11, had developed 4 episodes of sustained symptomatic palpitations with a pulse up to 190 beats/min., in the past 4 weeks. WPW had been diagnosed in grandfather and aunt. An echocardiography performed in the patient did not demonstrate any abnormalities.

The patient’s WPW has been asymptomatic until 4 weeks prior to presentation. Due to the clinical manifestations, an electrophysiological study (EPS) was performed aiming to map and ablate the accessory pathway (3). Catheters were placed to right atrium, ventricle and coronary sinus (CS). During the programmed atrial stimulation, an antegrade transmitting right sided posterior septal pathway was found. Following multiple radiofrequency (RF) ablations, the pre-excitation signal was remained. The EPS was ended, in order to plan a new RF-ablation with the Ensite Array (SJM, St. Paul, MN, USA) (EA) balloon mapping (3). EA provides a virtual activation of intracardiac transmission on a beat- to-beat basis (3).

At the second EPS, a catheter was placed in the CS, a non-contact-mapping EA balloon at the right atrium and the ablation catheter by

References

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