Radiofrequency Catheter Ablation of Posterior Paraseptal Accessory Pathway with Atresia of the Coronary Sinus Ostium

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Atresia of coronary sinus (CS) ostium is a rare abnormality and only a few case reports in association with electrophysiological studies. These patients have been reported to have a variety of several arrhythmogenic sources. A 42-year-old man was referred to our hospital for an electrophysiologic study because of recurrent episodes of palpitation. A 6-French decapolar catheter was introduced from the right jugular vein and advanced to the near the CS ostium. But, we could not advance the catheter into the CS despite several attempts. On coronary angiogram, an anomalous atresia of the CS ostium was discovered. Regular tachycardia was easily induced by an atrial stimulus, we suggested the patient had an atrioventricular reentrant tachycardia. During the tachycardia, the earliest retrograde atrial activation was recorded in the 5-6 o'clock region of the mitral annulus. The ablation catheter was inserted from the right femoral artery to the accessory pathway (AP) of posterior paraseptal area. Radiofrequency energy was delivered to this site, resulting in elimination of the AP. After this application, there was persistent ventriculo-atrial dissociation and led to successful ablation of the AP. We report a rare case of the ablation procedure of posterior paraseptal AP with atresia of the CS ostium.

Keywords: atresia of the coronary sinus ostium, posterior paraseptal accessory pathway, atrioventricular reentrant tachycardia