Accessory Pathway Ablation From Atrial Insertion in a Patient with Pre-excited Atrial Fibrillation

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Introduction: Pre-excited Atrial Fibrillation (AF) is a medical emergency because of rapid antegrade conduction over an accessory pathway (AP) that bypassed the normal rate-limiting effects of the atrioventricular (AV) node, and the resultant excessive ventricular rates may lead to ventricular fibrillation or Sudden Cardiac Death. In such cases, ablation of the AP is a prevailing therapy which has high successful rate with minimal complication and low relapse rate. We present a case of successful ablation of a patient with WPW syndrome during AF rhythm from atrial side.

Methods: A 68 years old woman had been admitted due to palpitation. Blood pressure was 120/90 mmHg. ECG showed irregular wide QRS tachycardia, rate up to 200 beat per minute (BPM), LBBB morphology, negative polarity in all 3 inferior leads and V1 and positive polarity in V2 assumed as pre-excited AF from right posteroseptal (figure 1) suggesting posteroseptal WPW. Localization and subsequent catheter ablation of AP is usually performed during sinus rhythm in patients with overt AP or during orthodromic tachycardia or ventricular pacing in those of concealed AP to find the earliest retrograde. Several cases showed that in case of pre-excited AF, ablation of AP can be done from ventricular insertion guided by AP potential or earliest ventricular EGM. In case of difficult or failed ablation from ventricle side, ablation from atrial side is possible. Identification of the right posteroseptal area is important. We identify this area by using CS catheter as marker of tricuspid anulus with LAO 45° and RAO 45°. The ablation was done from right posteroseptal during AF.

Result: Within 10 second, the AP successfully terminated and the rate decreased to 90-120 BPM. The AF and spontaneously terminated into sinus rhythm (SR). We succeed to eliminate AP at the first attempt. The next day ECG showed SR with no delta.

Conclusion: Ablation of right posteroseptal AP during AF from atrial side is possible. Knowing the anatomy to identify right posteroseptal part to localize AP is important.