MP1-14

Late Enlargement of Radiofrequency Lesions in Children: This is really truth?

Melo S., Pisani C., Miura N., Rochite C., Scanavacca M.
Institute of Heart from São Paulo Brazil USP

INTRODUCTION: Despite the current clinical use of radiofrequency (RF) catheter ablation in children, the effects of RF lesions in immature myocardium remain unknown. This study was specifically designed to investigate the late occurrence of RF lesions in the myocardium in development. METHODS AND RESULTS: Magnetic resonance imaging and coronary angiography were performed in 20 patients, who underwent RF catheter ablation due diagnosis of arrhythmia under the age of 18 years after signing consent forms. Fourteen patients were female with median age of 15(Q1: 10 Q:16) years-old. AVRT ablation was performed in 5, AVNRT in 13, AT in 1 and Mahaim fiber in 1 patient. The MRI was perfomed at median time of 6 years (Q1: 5 Q3:8,75) after the ablation. The mean weight, height and body mass index at the time of MRI were, respectively, 66±9Kg, 168±7cm and 23.4±2,4. Mild ventricular fibrosis was found in 2 patients (1 after Mahaim fiber ablation and 1 after AVNRT). Also, mild atrial fibrosis was detected in 5 patients (AVRT (1), Mahaim fiber (1) and AVNRT (3) ablations). The fibrosis' site corresponded to the RF application sites. Angiotomographies performed in the same period of the MRI were normal. All patients were asymptomatic. CONCLUSIONS: Clinically significant fibroses were not found in atrial or ventricular myocardium in this small series of patients who underwent RF ablation catheter under the age of 18 years. These findings may have implications when deciding for RF ablation of supraventricular tachycardias in children.