Arrhythmias During Cardiac Catheterization Procedure for Congenital Heart Disease

Sakta Suryaguna

Introduction: Cardiac catheterization procedures is a widely accepted modality for management of congenital heart diseases. There are several possible complications that may occur during the procedure including arrhythmias. The objective of our study was to determine the incidence of arrhythmias and their correlation with congenital heart disease during cardiac catheterization procedure.

Methods: The data of patients referred for diagnostic or interventional cardiac catheterization procedures for congenital heart diseases between September 2009 and July 2019 were analyzed retrospectively. Procedure with transient arrhythmias that immediately relieved by catheter manipulation were excluded. We compared the potential risk factors between arrhythmias and non-arrhythmias groups using univariate analysis, followed by multivariate logistic regression analysis for independent risk factors of the arrhythmias.

Result: From total of 920 patients evaluated, the median age, height and weight was 37 months (1 day – 69 years), 91 cm (31 cm – 184 cm), and 11 kg (1.8 kg – 130 kg) respectively. Most of the patients diagnosed with VSD, followed by PDA, ASD & TOF. During procedure, most arrhythmias developed in VSD patients during VSD closure. Among them there were cases of ventricular tachycardia, supraventricular tachycardia, extrasystole and atrioventricular block.

Conclusion: Cardiac catheterization in CHD may result in cardiac arrhythmias during procedure. Arrhythmias could be vary and most arrhythmias developed in VSD patients during VSD closure.