Rate Control by Transoesophageal Atrial Overdrive Pacing for Refractory Supraventricular Tachycardia

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INTRODUCTION: Tachyarrhythmia-induced cardiomyopathy (TIC) is a rare yet life-threatening phenomenon in children. TIC has been defined as myocardial dysfunction that is entirely or partially reversible after control of the responsible tachyarrhythmia and is typically caused by an incessant supraventricular tachycardia. In cases of unsuccessful termination of the tachycardia cardiogenic shock may occur. Several authors favour the use of mechanical circulatory support in such cases. In view of these partly severe cases the authors would like to present the option of transoesophageal overdrive pacing (TOP) as a tool for initial heart rate control and hemodynamic stabilization of patients with TIC refractory to conventional strategies of tachycardia termination. METHODS: Chart review for patients receiving TOP during the last 5 years in two centers was performed. RESULTS: A case series of successful TOP including technique and outcomes is depicted. CONCLUSION: Rate control through TOP is a safe and effective option to restore acceptable hemodynamics in infants with refractory supraventricular tachycardia and severe impairment of ventricular function. It presents the possibility of immediate heart rate control and offers time for myocardial recovery and safe implementation of antiarrhythmic drug therapy.