**RISK STRATIFICATION AND THERAPY OF ARRHYTHMOGENIC RIGHT VENTRICULAR CARDIOMYOPATHY**

**D. Corrado**

University of Padova, Italy

Arrhythmogenic Right Ventricular Cardiomyopathy (ARVC) is a genetically determined cardiomyopathy which predisposes to life-threatening ventricular arrhythmias and arrhythmic cardiac arrest. The main goal of clinical management is prevention of sudden cardiac death (SCD). Treatment consists of restriction of physical exercise, antiarrhythmic drugs, catheter ablation and implantable defibrillator (ICD). Desmosomal-gene mutation carriers who practice competitive sports activity show a more severe disease phenotype and a higher risk of malignant ventricular arrhythmias. As a consequence, patients with a definite diagnosis of ARVC (and possibly even young carriers of desmosomal-gene mutations with no features of the disease) should be restricted from participation in athletic activities, with the possible exception of recreational low intensity sports. In addition, there is a strong rationale for the use of beta blockers in ARVC because of the recognized pro-arrhythmic role of adrenergic stimulation and because they lower the mechanical stress on myocytes with genetically defective desmosomes. Antiarrhythmic drugs play a significant role role in decreasing number and the complexity of ventricular arrhythmias, but they do not reduce the risk of SD. The results of traditional “endocardial” catheter ablation are poor because of the high rate of ventricular tachycardia (VT) recurrence; “epicardial” VT mapping/ablation procedures is a promising approach to improve long-term success rate of catheter ablation. Implantable defibrillator (ICD) is the most effective therapy for interruption of potentially lethal arrhythmic events. Despite its life-saving potential, ICD implantation is associated with a high rate of complications and significant impact on quality of life. ICD should be reserved to selected patients after an accurate risk stratification. There is general agreement that patients with a history of cardiac arrest due to ventricular fibrillation or hemodynamically unstable VT are at high risk of SCD and needs an ICD. Indications for prophylactic ICD therapy in ARVC patients with no previous cardiac arrest or sustained VT remain a matter of debate. The decision to implant an ICD should be made on a case by case basis, by balancing the strength of the arrhythmic risk factors with the significant risk of device-related complications as well as with the impact of ICD on quality of life. Patients with no risk factors or desmosomal-gene mutation carriers with no or mild phenotypic expressions have a low arrhythmic risk and do not require an ICD.