Abstract: P1147

Subcutaneous implantable cardioverter defibrillator in patients with arrhythmogenic right ventricular cardiomyopathy: results from an Italian multicenter registry

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Background: Despite expanding indication of the S-ICD in clinical practice, limited data exists on safe and efficacy of S-ICD in arrhythmogenic right ventricular cardiomyopathy (ARVC) patients.

Purpose: The aim of this multicenter study was to evaluate the safety and efficacy of S-ICD in ARVC patients.

Methods: The study population included 44 consecutive definitive ARVC patients according to the 2010 ITF criteria (57% male, mean age 37±17 years [range 10–75 years]) who received an S-ICD implantation. Eighteen (41%) patients were implanted for secondary prevention.

Results: At implant, all inducible patients (34/44) had conversion of induced ventricular fibrillation (VF) at 65 J. No early complications occurred. During a median follow-up of 12 months (7- 19), 3 (6.8%) patients experienced complications requiring surgical revision. No local or systemic device-related infections were observed. Six patients (14%) received a total of 61 appropriate and successful shock on ventricular arrhythmias (VA). Six (14%) patients experienced 8 inappropriate shocks for oversensing of cardiac signal (4 cases) and non-cardiac signal (4 cases) with one patient requiring device explantation. No patients had the device explantation due to the need for antitachycardia pacing.

Conclusions: according to our study results, S-ICD is safe and effective in terminating both induced VF and spontaneous VA in ARVC patients suggesting that S-ICD is a potential valid alternative to transvenous ICD. Proper pre-implantation ECG screening, better device programming, and software upgrade offer the potential to reduce the relative high rates of inappropriate shocks and surgical reintervention observed in our ARVC patients.