Background: It is not clear when to perform right atrial (RA) ablation in patients with chronic AF (CAF). The objective of this study was to compare the clinical and spectral characteristics of AF to identify predictors of RA ablation to terminate AF.

Methods: In 12 patients (age 65±6 years) with CAF, antral pulmonary vein isolation and ablation of complex fractionated atrial electrograms (CFAEs) were performed until AF terminated (within 120 minutes of radiofrequency energy application). In this retrospective analysis, patients were categorized in 3 groups: Group 1) Termination of AF with left atrial (LA) ablation only (n=3); Group 2) termination of AF with left and right atrial ablation (n=4); and Group 3) No termination after left and right atrial ablation (n=5). Clinical characteristics and dominant frequency (DF) were compared at baseline and 1 min before termination of AF.

Results: The 3 groups were similar for all clinical variables, except for prior AF ablation which was more frequent in Group 2. (p=0.02). At baseline, DF in V1 and CS were comparable in the 3 groups (Table). Only DF in the CS before termination was significantly different among the 3 groups (p=0.04) and may be predictive of the need for RA ablation in these patients with chronic AF.

Conclusion: Higher prevalence of repeat ablation procedures in patients who needed right atrial ablation may indicate that, right atrial drivers are under recognized during initial ablation. Therefore, right atrial drivers should be sought after during redo procedures for AF.

Baseline	**V1**	**CS**
Termination with LA ablation	5.0±1.0	5.6±0.5
Termination with LA + RA ablation	4.4±1.0	6.0±0.5
No termination	5.3±1.0	4.8±1.2
p	0.4	0.3
Before termination	V1	CS
Termination with LA ablation	5.1±1.0	4.8±0.4
Termination with LA + RA ablation	4.8±1.6	5.5±0.5
No termination	4.4±0.8	4.3±0.7
p	0.7	0.04

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Results of the CASA study: the automatic atrial capture management.

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The CASA study has included 297 patients in France implanted with an EnPulse® dual chamber pacemaker (Medtronic, Minneapolis, USA). Purpose of this study is to compare manual atrial threshold (MAT) and threshold assessed by the automatic atrial capture management function (ACM).

Methods: Patients are 76 +/- 10 years old; indications were atrio-ventricular block (AVB) 70% and sinus dysfunction (SD) 30%; 31% had paroxystic atrial arrhythmias before implantation. Measurement of P wave, manual atrial threshold and atrial lead impedance have been performed at implantation, before discharge, 6 to 12 weeks after and at 6 months follow-up. At each follow-up automatic atrial thresholds are collected by interrogation of the device via telemetry and compared with the manual values by R coefficient correlation test.

Results: P wave amplitude and atrial lead impedance are stable during follow-up without significant difference. Concerning atrial thresholds, there is no difference between manual and automatic thresholds at each follow-up. R coefficients are very high showing an excellent correlation between the two methods.

Conclusion: We have observed a very good correlation between atrial threshold assessed by automatic atrial capture management function and manual atrial threshold test.

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Ventricular arrhythmias in cardiac pacing patients multicentric study

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Background and aim: Patients implanted with dual chamber (DC) pacemakers (PM) have frequent episodes of arrhythmia. The interest of memory functions (MF) featuring EGM recordings to recognize and characterize these arrhythmias, particularly at the ventricular level, is still not well evaluated. The goal of this study is to establish the pertinence of MF at the ventricular level by repeated analysis at follow-up of the data recorded in the PM memories.

Methods & Results: A prospective series of 405 patients (76 +/- 10 yrs), M 59%, F 41% implanted with DC Kappa PMs (Medtronic, MN, USA) for atrio-ventricular block (37%) and sinus dysfunction (50%) were seen at two post implant semestrial follow-ups, at 6 months (F/u1) and at 12 months (F/u2). 83 pts (20%) at F/u1 and/or F/u2 showed ventricular tachycardias (VT) defined as at least 5 consecutive complexes at a frequency > 175 bpm for a total of 102 follow-ups (17%). 55 pts (14%) showed VT at F/u1, 47 (12%) at F/u2 and only 19 (5%) at both F/u1 and F/u2. VT occurrence was statistically independent from mode switch episodes from the atrial level. Analysis showed that age, pacing indication, pacing mode and cumulated percentage of pacing are not factors in the presence of VT. In the VT group, 65% of patients present cardiopathy, with an ejection fraction of 54 +/- 17%. We observe that cardiopathy, is a statistical difference with the rest of the population of this study (52%, p< 0.05).

Conclusion: In our series, VT is frequent observed in 20% of PM patients implanted for standard indications at 6 and 12 months follow-ups. 2/3 of these patients show arrhythmia from the first 6 months f/u and 1/4 of these patients at both 6 and 12 months f/u. 1 year of follow up seems to demonstrate best sensitivity for VT detection. MF featuring EGM recordings are a tool for reliable diagnostic and monitoring of these events. Further studies are required to evaluate the prognostic significance of these arrhythmias.

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Ventricular arythmias in cardiac pacing patients : monocentric study

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Follow-up (Nb)	P Wave (mV)	Impedance(Ohm)	MAT(Volt)	R coefficient	ACM(Volt)
Implant (297)	2.8±1.6	614±225	0.8±0.5		
Post-op (269)	2.3±1.2	537±153	0.7±0.4 [1]	[1] 0.844	0.7±0.4 [1]
6-12 Weeks(238)	2.3±1.05	518±146	0.6±0.4 [2]	[2] 0.849	0.7±0.4 [2]
6 months (186)	2.4±1.2	498±142	0.7±0.4 [3]	[3] 0.891	0.7±0.5 [3]

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