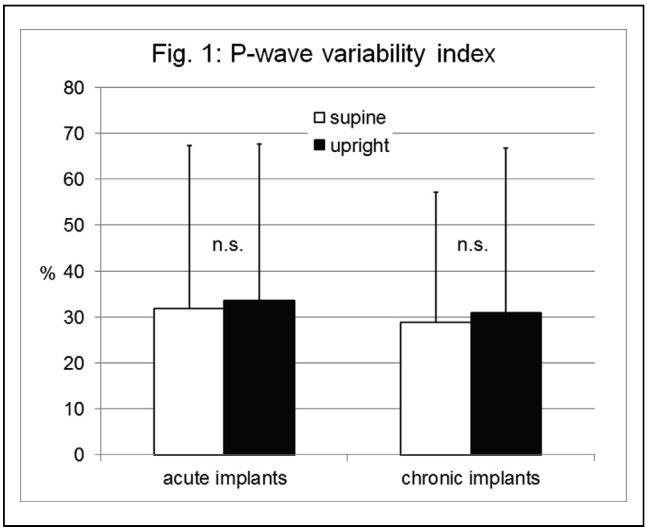
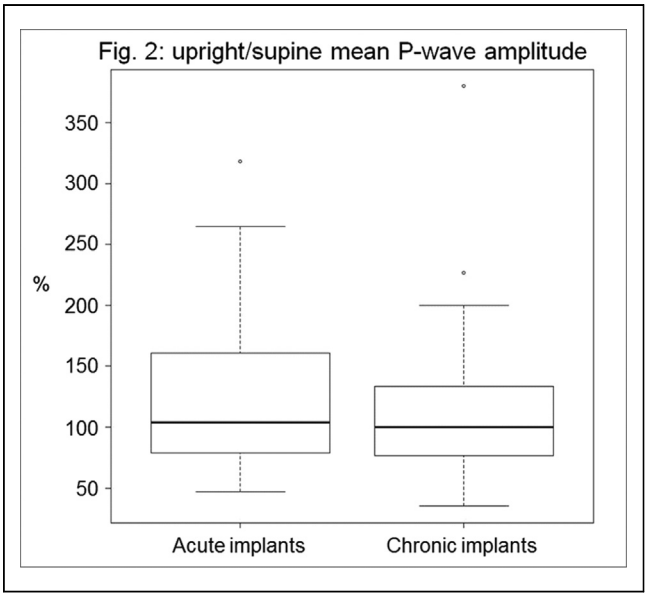




CONCLUSIONS The tested VDD system was not affected by postural changes throughout the follow-up.

073_16838-J4

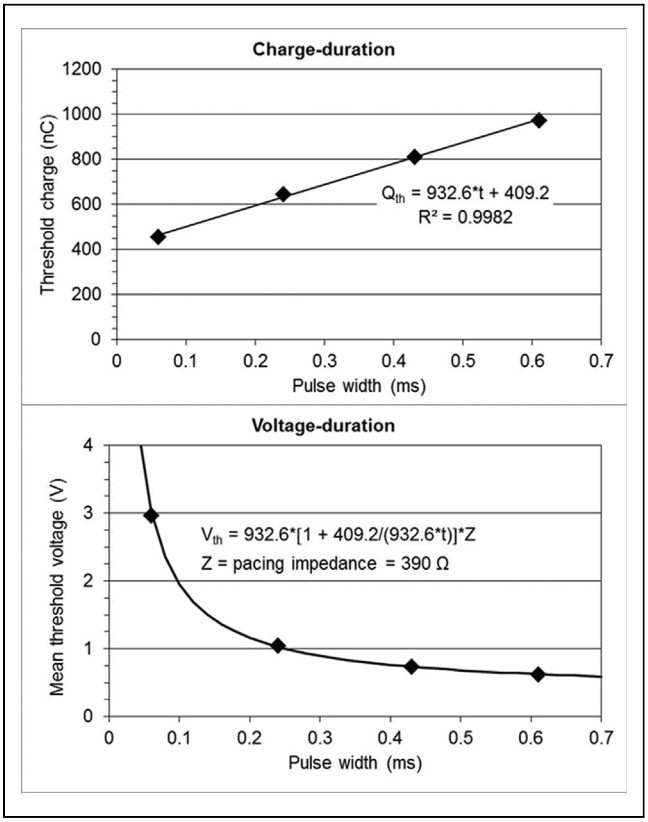
Ventricular Excitability in Chronic Implants of a VDD Single-Pass Lead

F. Di Gregorio,[1] D. Orsida,[2] N. Agostini,[2] A. Reggiani,[3] P. Pepi,[3] G. Arena,[4] V.M. Borrello,[4] D. Vaccari,[5] S. Vittadello,[5] G. Neri[5]
[1]Clinical Research Unit, Medico Spa, Rubano; [2]Cardiology Dept., Sant'Antonio Abate GH, ASST Valle Olona, Gallarate; [3]Cardiology Dept., Carlo Poma GH, Mantova; [4]Cardiology Dept., Nuovo Ospedale Apuane, Massa; [5]Cardiology Dept., San Valentino GH, Montebelluna, Italy

INTRODUCTION Efficient myocardial stimulation ensures reliable pacing with restricted energy expense.

METHODS We assessed the ventricular stimulation performance of a single-pass lead for VDD pacing (Phymos 4, Medico) in the chronic follow-up (28±14 months) of 29 implants. This lead is tined, non-steroid eluting and features a 5 mm^2 tip electrode made of Pt-coated microporous Ti. All patients, affected by AVB with preserved sinus function, were implanted in RV apex. The threshold charge-duration curve was derived in each implant by linear regression of individual data in the pulse-width range from 0.06 to 0.61 ms (see the enclosed figure). Regression slope and intercept correspond, respectively, to the rheobase (in current) and the product of rheobase and chronaxie.

RESULTS Rheobase, chronaxie, and limit threshold charge at 0 ms width averaged 0.76±0.18 mA, 0.38±0.09 ms, and 285±81 nC, respectively, with lognormal data distribution. The voltage threshold at 0.5 ms was 0.60±0.08 V, with 99% of the cases included between 0.41 and 0.85 V in the sampled population, according to lognormal modeling.



CONCLUSIONS Low-energy chronic VDD stimulation is achieved with the tested single-pass lead.

073_16956-Q1

Migration of a Pacemaker Lead to an Unusual Site

S. Cay, O. Ozeke, F. Ozcan, D. Aras, S. Topaloglu
Department of Cardiology, Division of Arrhythmia and Electrophysiology, University of Health Sciences, Yuksek Ihtisas Heart-Education and Research Hospital, Ankara, Turkey

CASE An 80-year-old female patient with mechanical mitral valve prosthesis, complete heart block and atrial fibrillation was referred to our arrhythmia center for implantation of a pacemaker. Through the left pectoral region and the axillary vein a single chamber pacemaker with an active fixation lead was implanted at the right ventricular base. Due to severe pulmonary hypertension, tricuspid valve regurgitation and the dilated right ventricle the procedural and fluoroscopic times were much higher compared to a standard anatomy. Only 1 week after the implantation, she was admitted to our emergency department with syncope. The ECG showed complete heart block and baseline atrial fibrillation as in the initial diagnosis. Device interrogation demonstrated no sensing and capture. Chest X-ray showed the dislodged lead in the abdominal area. We performed a selective hepatic venography via the femoral vein and inferior vena cava and realized that the lead was in the hepatic vein and the distal tip embedded into the hepatic tissue (Figure 1). With the back-up of a general surgeon, we gently performed a simple traction to remove the lead. No important damage to the liver and bleeding occurred. At the same procedure, we tried to implant another lead at the right ventricle

however, all attempts failed. Therefore, using a coronary sinus implantation system and a coronary sinus lead the lead was implanted into the posterolateral branch of the great cardiac vein with good sensing and pacing parameters without diaphragm stimulation (Figure 2). At the 1, 3, and 6 months follow-up, no change in sensing and pacing parameters were observed.

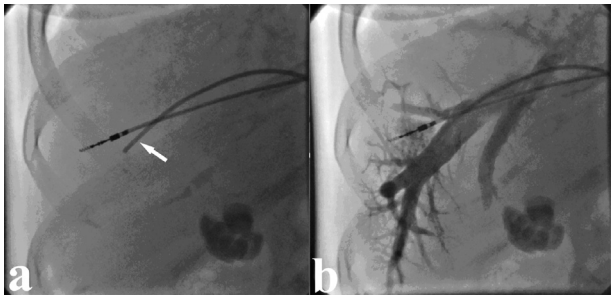


Figure 1. Active pacemaker lead demonstrated in the liver before (a) and after contrast injection (b). The lead tip embedded in the hepatic tissue with the body located in the hepatic vein. White arrow, the multi-purpose catheter.

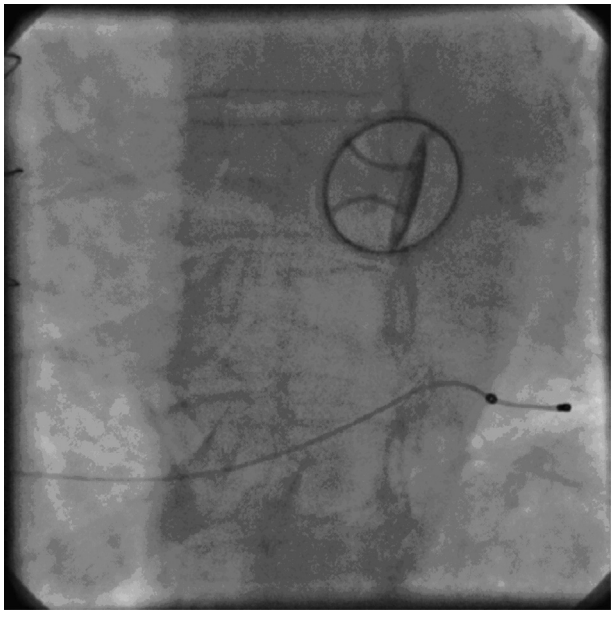


Figure 2. Bipolar coronary sinus pacemaker lead implanted in the posterolateral branch.

073_16939-J4

Local Experience With a No Post-Procedure Antibiotic for a New Cardiac Implantable Electronic Devices Implantation

N. Alshoaibi
Cardiology, King Abdulaziz University, Jeddah, Saudi Arabia

BACKGROUND Prophylactic intravenous antibiotic reduces infections in patients undergoing cardiac implantable electronic devices (CIEDs) implantations. However, there are few data regarding impact of post procedures antibiotic on outcomes. On the basis of this reasoning, most patients undergoing CIEDs implant at KAUH over the past 2 years have not received antibiotic post procedure. We sought to quantify our experience with this approach.

METHODS We retrospectively reviewed all charts of patients who underwent CIED implantation between February 2014 and August 2016 at KAUH. For each patient, data were abstracted regarding the type of device implanted, demographics, functional class and the presence or absence of coexisting medical disorders. For every follow-up visit, the presence or absence of local pocket infection and systemic infection were noted. For patients not being followed at our center, telephone contact was made with the patient to ascertain the date of their last review.

RESULTS One hundred and forty-five patients underwent CIED implant during the period of February 2014 and August 2016. The charts of 138 patients were available for review. Ninety-one (66%) patients were male and mean age was 61 +/- 12 (range 23-86). Seventy-six (55%) patients had diabetes and 22 (16%) were hypertensive. The NYHA functional class was documented in 105 patients; most were class 2 (46/105; 44%) or class 3 (34/105; 32%) while 24 (23%) were class 1, and 1 patient was class 4. We included only the patients with a new CIED implant and excluded patients with end stage renal disease, intubated patients, patients on Immunosuppressant drugs and patients with active cancer. Thirty (22%) patients had a single chamber pacemaker, 37 (27%) had a dual chamber pacemaker, 21 (15%) had a single chamber ICD, 27 (19.5%) had a dual chamber ICD and 23 (16.5%) patients had a biventricular ICD. All patients received pocket irrigation with saline solution only. Of the 138 patients, 2 (1.4%) patients had CIED pocket infection. The mean duration of follow-up in these patients was 156 days (range: 29-507 days). Implant to infection time in those 2 patients were 67 and 156 days respectively, and all of them underwent devices and leads extraction, with re-implantation on the contralateral side. No systemic infections or mortality were noted due to infectious complications. Seven Patients had no follow-up and two patients died during the follow-up periods.

CONCLUSION A no post-procedure antibiotic strategy in patients receiving a new CIED has been associated with a very low rate of local infection. A prospective study examining the value of post-procedure antibiotic is warranted.

073_16194-J1

An Initial Experience of Using Leadless Transcatheter Pacing in Chinese

C.P. Chan, Y.Q. Niu, K.C. Tam, Y.S. Chan
The Chinese University of Hong Kong, Hong Kong Kiang Wu Hospital, Macau, Hong Kong

INTRODUCTION Transcatheter pacing system (TPS, Micra, Medtronic) was an alternative to conventional transvenous pacing. The feasibility of large delivery sheath in Chinese was unknown. The purpose was to report a series of TPS implantation in 2 centers.

METHODS This is a prospective cohort study from 2015. The primary efficacy was the percentage of patients with stable pacing capture thresholds (< 2V at 0.24 msec) and freedom from procedure related complications.

RESULTS TPS were implanted in 44 patients (Age 81.9±9.8, Male=19) and mean follow up was 5.1± 4.2 months. One patient has bioprosthetic tricuspid valve, three underwent hemodialysis, six underwent extraction due to infection before and 1 has absence of superior vena cava. Indications were sick sinus syndrome (50%) and heart block (50%). The body weight was 58±9.4 kg (lowest one was 34 kg). First attempt successful rate was 36/44. One patient underwent 9 attempts and complicated by non-capture. Snaring and re-implanted uneventfully. Safety endpoint was 90.9%. One cardiac tamponade and was re-implanted after tapping. The primary efficacy was 97.7%.

CONCLUSIONS TPS has high successful implantation rate in Chinese.

073_16796-J1

Micra Leadless Pacemaker. Implantation and Mid-Term Follow-Up Results

J.L. Martínez-Sande, J. García-Seara, L. González-Melchor, M. Rodríguez-Mañero, X.A. Fernández-López, D. Iglesias-Alvarez, V. González-Salvado, J.R. González-Juanatey
Unidad de Arritmias y Electrofisiología Cardíaca. Servicio de Cardiología y Unidad Coronaria. Hospital Clínico Universitario de Santiago de Compostela, Cibercv, Spain

INTRODUCTION Currently, studies on the leadless pacemaker (Micra) have mostly been limited to clinical trials with less than 6 months' follow-up and they often fail to reflect real population outcomes. We sought to evaluate electrical parameters at implantation and during follow-up, as well as the safety of this new technique.