153±21 ms and basal mean EF 53±13%. HBP improved QRSd to 137±22 ms acutely. In 117 (80%) patients we obtained complete normalization or narrowing of QRS, whereas in 30 (20%) patients the QRS morphology remained unchanged. HBP threshold at implant was 1.6±0.9 V/i0.5 ms. During a mean follow-up of 5.2±3.3 years 12 (8%) patients lost Hisian capture and 1 patient was lost at follow-up. The remaining 134 patients showed persistence of efficient HBP with mean QRS duration persisting 138±21 ms. Mean %WP was 81% (83% of patients had WP>40%). Chronic AF (AT/AF 100%) was found in 49 (36%) patients. Premature termination of Hisian pacing was due to up-grading to CRT in 2 cases, high threshold in 7 patients and infections in 3 patients. A back up lead during follow-up was added in 3 patients. One patient had severe loss of capture with syncope and emergency hospitalization. The final pacing threshold was 2.1±1.5 V/i0.5 ms. At the end of follow-up the mean EF was 55±12%. 12 (9%) patients experienced heart failure episodes and 5 (3%) patients had acute coronary disease.

Conclusions: Permanent HBP corrected underlying BBB in 80% of patients referred for PM implantation. The more physiological electro-mechanical activation contributed to preserve LV function. The system showed a good performance in a long-term follow-up.

Abstract 42 Figure. His pacing in BBB patients

43 Hisian pacing with apical back-up on demand is safe and effective
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Background: His bundle pacing maintains ventricular activation through the physiological pathway and can prevent ventricular dys synchrony, functional deterioration and remodeling associated with chronic apical pacing. High threshold and low sensing are the major pitfalls we can encounter. Thus in selected patients including an apical back-up lead is advisable. Generally the His-Apical delay is programmed to its and remodelling associated with chronic apical pacing. High threshold and low sensing are the major pitfalls we can encounter. Thus in selected patients including an apical back-up lead is advisable. Generally the His-Apical delay is programmed to its windows in order to deliver His-bundle pulses and non-capturing apical pacing during the ventricular myocardial refractory period.

Purpose: We set the three-chamber PM enabling apical back-up stimulus only in case of Hisian capture loss, thus saving device's longevity.

Methods: Hisian pacing with apical back-up on demand was enabled in 17 patients implanted with suitable three chamber stimulators. Atrial lead was connected to the atrial port. Hisian lead to the LV port, and apical lead to the RV port. Pacing was enabled in both ventricular channels. Sensing was enabled only in apical lead to detect intrinsic activity and to detect response to hisian pacing. A proper blanking period (56 ms) was enabled in apical lead to prevent spike oversensing and a VV delay of 120 ms was set. When hisian pacing was effective, apical sensing occurred within the VV delay and prevented back-up stimulation (1’ and 2’ cycles in the figure). In case of hisian pacing failure, a back-up pulse was delivered at the end of the VV delay (3’ and 4’ cycles). False inhibition was properly prevented by post-spike blanking period; hemodynamic surveillance by transvalvular impedance (TVI) confirmed up was properly inhibited. At the last device interrogation, the PM diagnostics was separated as follows: 16 ULPI, 8 CPI, 16 CIED-LI and 9 CIED-IE. CIED was explanted in 94% of the cases. Twenty nine (63%) local bacteriological samples and 18 blood cultures (37%) were positive: Staphylococcus Aureus (27%), Coagulase-negative staphylococcus (40%), Staphylococcus agalactiae, Enterobacter faecalis, Propionibacterium acnes and Actinobacillus actinomycetemcomitans (10%) or negative in 20% of the cases. The majority of bacteria was sensitive to vancomycin. Blood cultures were positive in 56% of CIED-LI and 89% of CIED-ID. CIED explantation was complicated in 7% of the cases (pericardial effusion). Death occurred in 12.5 % of the cases (in 2 patients CIED was not explanted because of a poor general condition of the patient). A new CIED implantation was performed in 79% of the patients (42% of these implantations were performed during the first week after explantation). Mean duration of antibiotic therapy was 8, 5, 35 and 42 days in ULPI, CPI, CIED-LI and CIED-IE subgroups. Renal failure occurred in 7 patients on vancomycin. The majority of bacteria was sensitive to vancomycin. Blood cultures were positive in 56% of CIED-LI and 89% of CIED-ID. CIED explantation was complicated in 7% of the cases (pericardial effusion). Death occurred in 12.5 % of the cases (in 2 patients CIED was not explanted because of a poor general condition of the patient). A new CIED implantation was performed in 79% of the patients (42% of these implantations were performed during the first week after explantation). Mean duration of antibiotic therapy was 8, 5, 35 and 42 days in ULPI, CPI, CIED-LI and CIED-IE subgroups. Renal failure occurred in 7 patients on vancomycin. CIED infections occurred in 3 patients and subclavian thrombosis in one patient.

In conclusion, as reported in other series, Staphylococcus related infections were found in 2/3 patients. However, samples culture was negative in 20% of the cases. Mortality is high. Therefore, CIED indication has to be well discussed before implantation.

44 Management of cardiovascular implantable electronic device infection: a multidisciplinary approach is necessary
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Cardiac implantable electronic device (CIED) infection is a frequent complication and may lead to death in up to 35% of the cases. New recommendations have been recently published. We report the experience of a single center in a multidisciplinary management of CIED infections between 2013 and 2016. We analyzed retrospectively all patients referred to our center for a CIED infection and collected all clinical and bacteriological informations as well as the management and complications of CIED explantation and medical treatment. Patients are systematically managed by an interventional cardiologist and an infectious disease specialist. CIED Infections are separated into 4 groups according to recommendations: uncomplicated local pocket infection (ULPI), complicated pocket infection (CPI) in case of lead or systemic infection, CIED and Lead infection (CIED-LU) and CIED infection with endocarditis (CIED-IE).

The study population included 48 patients (Mean age 75 ± 2 years, 32 Males; 39 PM and 9 ICD) with 49 infections (one patient presented with 2 episodes of endocarditis). They were separated as follows: 16 ULPI, 8 CPI, 16 CIED-LI and 9 CIED-IE. CIED was explanted in 94% of the cases. Twenty nine (63%) local bacteriological samples and 18 blood cultures (37%) were positive: Staphylococcus Aureus (27%), Coagulase-negative staphylococcus (40%), Staphylococcus agalactiae, Enterobacter faecalis, Propionibacterium acnes and Actinobacillus actinomycetemcomitans (10%) or negative in 20% of the cases. The majority of bacteria was sensitive to vancomycin.

In conclusion, as reported in other series, Staphylococcus related infections were found in 2/3 patients. However, samples culture was negative in 20% of the cases. Mortality is high. Therefore, CIED indication has to be well discussed before implantation.

45 A 16 year single centre experience of transvenous lead and system extraction in patients with and without coronary sinus leads
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Background: Cardiac Resynchronisation Therapy (CRT) and coronary sinus (CS) transvenous lead extraction (TLE) may be necessary due to system infection/erosion or lead malfunction. We have previously published a cohort of 71 patients undergoing TLE of CRT systems over a 10 year period. Our centre has now 16 years’ worth of experience and we report on this and directly compare the findings to patients undergoing TLE of cardiac implantable electronic device for and non-CRT (without CS leads)

Purpose: We hypothesise that patients undergoing TLE of CRT devices are likely to have a higher 30-day mortality due to their increased comorbidities and need for CS lead extraction.

Methods: All TLEs between 2000 and 2016 were entered into a computer registry and analysed. Patients were divided into either CRT (involving CS lead extraction) or non-CRT (not involving CS lead extraction) groups for comparison.

Results: 928 patients undergoing TLE were included in the analysis. In the CRT group (227 patients), 194 (86%) were male and age ranged from 34 to 91 years