Method and result: A 64-year-old male with standard indication for CRT-D implantation was referred to our institution for a CRT-D implantation. Unfortunately, intubation of the CS was not possible. TEE showed a congenital CS anomaly with complete drainage of the CS into the left atrium. Because of contra-indication for general anaesthesia and thus for surgical epicardial implantation, we proposed to implant the LV lead by a transseptal approach.

After the patient had given his consent, a transseptal puncture was performed via the right femoral vein. A conventional screw-in lead was implanted at the laterobasal segment of the LV using a deflectable catheter guide introduced via the left subclavian vein through the transseptal puncture. Post-implantation parameters of the LV lead were acceptable: pacing threshold 0.7 V-0.4 ms, impedance 435 ohms, R wave amplitude 5 mvolts. Right ventricular and right atrium leads were then implanted (fig 1)

A post-implant CT scan confirmed the ectopic location of the CS ostium without persistent superior vena cava (fig 2).

The patient was discharged on anticoagulation with a targeted international normalised ratio between 3 and 4. At the one- and three-month follow-up, no complication had occurred. He was in class 2 of the NYHA and had not been hospitalised. Electrical parameters remained steady.

Conclusion: Complete drainage of the CS in the left atrium without persistent vena cava is a rare congenital abnormality. When cardiac resynchronisation therapy is needed, transseptal implantation could be a feasible alternative.

Gene-specific effect of beta-adrenergic blockade on QT duration in the Long QT syndrome

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Background: In the long QT syndrome (LQTS) the clinical efficacy of beta-blocker treatment differs according to the genotype. We aimed to assess the effect of beta-blocker treatment in LQT1 and LQT2 patients.

Patients and methods: 24-hour Holter ECG were recorded before and after beta-blocking therapy initiation in genotyped LQT1 (n=30, 8 males, mean age 21±17) and LQT2 patients (n=16, 8 males, mean age 19±15). QT duration was measured on consecutive 1-minute averaged QRS-T complexes leading up to 1440 QT-RR pairs for each recording. Then, we computed subject- and condition-specific log/log QT/RR relationships which were used to calculate QT interval duration at RR=1000 ms (QT1000).

Results: Before treatment, coefficients were higher in LQT1 than in LQT2 patients (0.53±0.10 vs. 0.40±0.11, p<0.001) and QT1000 was longer in LQT2 than in LQT1 patients (521±38 vs. 481±39 ms, p<0.01).

Beta-blockers significantly prolonged the mean RR interval (RR=827±161 ms before treatment and 939±197 ms on beta-blocker, p<0.0001). The coefficients were not significantly modified by beta-blockers (0.41±0.19 in LQT1 patients and 0.52±0.12 LQT2 patients). Beta-blocker treatment was associated with a prolongation of the QT1000 interval (from 481±39 to 498±43 ms, p<0.01) in LQT1 patients but with a shortening in LQT2 patients (from 521±38 to 503±32 ms, p<0.01).

Conclusions: Our results confirm the elevated coefficient of the QT/RR relationship in LQTS patients. LQT2 patients showed higher coefficient and longer QT1000 when compared to LQT1 patients. The effect of beta-adrenergic blockade on QT1000 duration was gene-specific. Given the demonstrated efficacy of blockers in LQT1 and 2 patients, our data suggest that QT1000 might be a poor predictor of outcome under anti-adrenergic therapy.

Is it necessary to indicate another electrophysiological study in patients previously studied for a preexcitation syndrome?

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Accessory pathway (AP) refractory period (RP) increases from the youth to the elderly. The large indications of AP ablation have changed the natural follow-up. The purpose of the study was to report the clinical and electrophysiological data of pts with a Wolff-Parkinson White syndrome (WPW), studied within 1 to 20 years of one another to evaluate the changes of these data.

Methods: 2 baseline EPS were performed within 1 to 20 years (y) of one another (mean 9 y ± 4) in 61 pts, 37 males and 24 females, aged initially from 10 to 67 y (30±14), with a patent WPW. First electrophysiological study (EPS) was indicated for syncope (n=6), atrioventricular reentrant tachycardias (AVRT) (n=34), atrial fibrillation (AF) (n=5) or for asymptomatic preexcitation (n=16). The protocol was similar: the higher rate conducted through AP.