Ablation of AF cured autonomic dysfunction

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Backgrounds and objective: Did AF ablation also improve the autonomic dysfunction during AF attack?

Methods: We reported two cases of AF ablation using circumferential pulmonary vein isolation, linear ablation, and CAFAE ablation. Both used the navigation system. Not only AF had been cured, but autonomic dysfunction vanished.

Case 1: Mr X was a 40-year-old gentleman. He started to have AF attack since 2007. His frequency of attacks increased gradually. Each time, his AF attack was associated with hiccough and belching. He had AF ablation in June 2008 and atrial flutter ablation in April 2009. Since then, there were no more attacks of symptomatic AF with GI side effect. Blood pressure improved too.

Case 2: Ms Y was a 41-year-old lady. She started to have AF attack since 2008. She had on and off AF attacks associated with flushing. She had AF ablation on June 2009. First day post-operation, she had multiple flushing and sinus tachycardia. Then, the flushing subsided after 1 week. There was no more symptomatic AF attack with flushing afterwards.

Results: Autonomic dysfunction was associated with AF attacks and could be abolished using RF technique.

Conclusion: When AF attacks associated with autonomic dysfunction symptoms, ablation of AF should be highly considered.

Inappropriate implantable cardioverter defibrillator shock in a permanent atrial fibrillation patient: case report

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Background and objectives: About 15–20% of cases of inappropriate shock occurred in atrial fibrillation (AF) patients who received implantable cardioverter-defibrillator (ICD) and this remains a management challenge. Most studies on reducing shocks involved patients without permanent AF.

Methods: A 53-year-old lady presented with palpitation for 2 h and experiencing frequent shock from ICD. She had diabetes, hypertension, dyslipidaemia, permanent AF, left ventricular failure, and adequately revascularized ischaemic cardiomyopathy. Transoesophageal echocardiography revealed ejection fraction of 15%. The left atrial anteroposterior diameter was 6.1 cm. Her AF rate was fairly well controlled (range: 65–105 bpm) by digoxin 62.5 μg OM and bisoprolol 2.5 mg OM. She underwent successful single-chamber ICD implantation (Medtronic Maximo V 7232) 3 weeks prior to this admission for primary prevention. Post-implantation setting was programmed based on physician-tailored approach (VF detection at 182 bpm, VT detection at 162 bpm, discriminators: on; ATP: on).

Results: ECG on arrival showed AF with fast ventricular response at 150–180 bpm. Immediate ICD interrogation showed that 90 shocks were administered during the episode of palpitation. The rhythm at that time was corresponded to AF with fast ventricular response. All haematological and biochemical studies were normal. Optimization of the rate control medications and ICD setting was done (VF detection at 200 bpm, VT detection at 171 bpm, discriminator: on; ATP: on). She was subsequently asymptomatic and free from inappropriate shock.

Conclusion: Patient with underlying permanent AF with ICD implantation required an adequate rate control and tailored ICD therapy. Randomized trials to define optimal management in this cohort of patients are needed.
Posture-dependent AV block as a complication of robotic cardiac surgery: ECG and cardiac MRI findings

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A 50-year-old man presented to emergency with light-headedness associated with supine, but not upright posture. The ECG showed profound first-degree AV block with a PR interval of $>350$ ms. The PR interval reverted to $220$ ms within 24 h, but remained prolonged. He had taken propranolol 10 mg 3 h prior to presentation. Physical examination, clinical biochemistry, and echocardiography were unremarkable. He underwent (daVinci) Robotic mitral repair surgery 3 years previously for mitral valve prolapse, and the pre-operative ECG in sinus rhythm was normal. Preoperative atrial fibrillation had been treated with metoprolol and diuretics. Brief paroxysmal atrial tachycardia and nocturnal AV block was seen on a postoperative Holter study. In the ward, carotid sinus massage (CSM) failed to provoke bradycardia or AV conduction block. Ten second Valsalva manoeuvres in the supine (but not upright) position provoked transient third-degree AV conduction block. Repeat Valsalva testing at 48 h again provoked high-grade second-degree block, only in the supine position. Cardiac MRI images were obtained (GE 3 T) which demonstrated endocardial fibrosis along the lateral mitral annulus, consistent with previous mitral valve repair, although significant focal late enhancement in the region of the AV node was not excluded. We present this unusual case of posture-dependent AV conduction block because of (i) provocation by the Valsalva manoeuvre, but not CSM, (ii) associated CMRI imagery, and (iii) as a hitherto undescribed delayed complication of Robotic heart valve surgery which could lead to late pacemaker implantation.