Subcutaneous ICD in anatomical challenging cases

Dear Editor,

We would like to thank Dogan et al. for their comments according to our paper “A plea for the single-lead ICD with atrial sensing due to anatomical considerations”2. The authors are right that anatomical complex cases might be treated with a subcutaneous implantable cardioverter-defibrillator (S-ICD). The S-ICD has got the advantage to avoid the long-term risk of endovascular lead placement, including displacement, intravascular infection, cardiac perforation, pneumothorax, vein thrombosis, and lead fracture.1 In our case the patient had a mild to moderate stenosis of the left subclavian vein in the setting of a persistent left superior vena cava (PLSVC). Due to intermittent atrial fibrillation we planned to implant a dual chamber ICD to better discriminate atrial tachycardia and thus to minimize inappropriate ICD shocks. The concept of an S-ICD is to avoid transvenous leads by a subcutaneous pre-sternal lead and an axillary submuscular pulse generator for sensing and defibrillation without the capacity for long-term pacing.3-6 The efficacy and safety of the S-ICD was proven in several multicenter trials and registries as well as in our own clinical practice. However, an S-ICD was not considered in our patient due to intermittent pre- and postautomat ic bradycardia necessitating intermittent ventricular stimulation. Additionally, another aim was to monitor the atrial arrhythmia to guide treatment strategy. An S-ICD should be discussed in all patients with an indication for an ICD except in patients with need for pacing or resynchronization therapy. Additionally, it should be avoided in patients with slow ventricular tachycardia’s (<170 bpm), which cannot be detected by the S-ICD. Another patient cohort, who should not receive an S-ICD are those with a high probability of recurrent ventricular tachycardias amenable to antitachycardial pacing (ATP).8,9 Several trials have shown, that ATPs are able to reduce the rate of appropriate shock delivery which itself is associated with worse clinical outcome8,10.

Conflict of Interest
The Authors declare that they have no conflict of interests.

References
Authors’ reply


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