long 14 F sheath. The outer sheath of the Artisan system was positioned at the ostium of the inferior vena cava in order to allow free catheter maneuverability with the inner sheath inside the right atrium. Navigation of the 3.5-mm open irrigated-tip catheter (Cool Path NS, St Jude) was guided by the three-dimensional map, fluoroscopy, and endocardial electrocardiograms (Figure 1). During ongoing orthodromic atrioventricular reentrant tachycardia, the catheter was robotically positioned at the atrial insertion of the AP. Sustained ablation of the AP could finally be achieved with the third energy delivery.

There were no periprocedural complications and 6 months after the procedure, the patient continued to be free of arrhythmia recurrences.

Radiofrequency catheter ablations of right-free wall APs remain a challenge, which is reflected by higher initial failure and recurrence rates compared with ablations of left-free wall APs. The principal cause for the lower success rates might be instability of the ablation catheter resulting in poor tissue contact during ablation at the target site on the TVA.

The Hansen Robotic System may facilitate ablations of right-sided APs, when accurate and stable tissue contact of the catheter tip can neither be achieved with standard handheld catheters, nor with specially preformed or steerable sheaths.

Conflict of interest: none declared.

Reference

CASE REPORT
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Extraction of a coronary sinus atrioverter and a dual-coil ventricular shock lead from the same patient: a tailored approach

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A dual-coil ICD lead and an atrioverter coiled lead implanted in the right ventricle and coronary sinus, respectively, were successfully removed with different techniques. For the ICD lead, we used a 16F laser sheath from the subclavian and for the atrioverter lead a Needle’s Eye from the femoral approach.

Case report
A 63-year-old male had an atrioverter defibrillator implanted in March 2000 for persistent atrial fibrillation.1 One single-coil atrioverter lead for cardioversion of atrial fibrillation was positioned in the coronary sinus (CS) and a second dual-coil ICD lead positioned in the right ventricle (Figure 1A). The device was removed 3 years later due to pocket infection, whereas leads were abandoned. In 2010, patient was admitted in a neighbouring hospital for repetitive fever attacks, with positive blood cultures of streptococcus bovis. Transoesophageal echocardiography showed vegetations at the level of the tricuspid valve. After a period of 3 weeks with intensive specific antibiotic therapy, patient was referred to our department for lead extraction.

For extraction of the dual-coil ICD lead, we selected a 16F Laser Sheath (Spectranetics, Colorado Springs, CO, USA), anticipating extensive fibrous adhesions at both coils.2 Extraction was successful, releasing both coils by laser sheath advancement employing a 6’ 05”” total lasing time at a repetition rate of 40 Hz and energy flux at 60 mJ/mm².

For the atrioverter lead, we used a COOK Needle’s Eye snare LRS001 retriever set with a 16F curved sheath, from femoral approach. The atrioverter lead was grasped with the Needle’s Eye in the right atrium. The collapsed lead could be drawn into the 16F sheath (Figure 1B–C). Subsequently, the 16F sheath was advanced over the collapsed lead by moderate hand power up to the proximal segment of the atrioverter coil (Figure 1D). Keeping the lead under moderate continuous tension and using the sheath for mechanical dilatation finally released the lead completely from the CS.3

Conclusion
This case report describes the successful extraction of two coiled leads from different locations. For the ICD lead, laser extraction from the subclavian approach was selected thus enabling effective destruction of fibrous tissue around both coils and counter traction for tip release. For the removal of the coiled CS lead, the femoral approach was preferred enabling a less aggressive mechanical dilatation with the propylene sheath of the Needle’s Eye inside the more vulnerable CS anatomy.

Conflicts of interest: B.M.v.G. is clinical advisor for Medtronic Trading NL BV, Heerlen, the Netherlands and consultant for RADI pressure wire systems, a Sint Jude Medical company. F.A.B. has no conflict of interest to declare.

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Excimer laser lead extraction by femoral approach

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Despite the latest improvements in pacemaker/defibrillator lead extraction techniques, this procedure may be hindered by specific problems related to patient/lead characteristics. We report the case of a 67-year-old man with a single-chamber implantable defibrillator (ICD) with a malfunctioning right ventricular (RV) defibrillating lead, referred for lead extraction. During extraction of the defibrillating electrode, the added sensing/pacing RV lead suddenly manifested an inapparent fracture with migration within the superior vena cava. Lead extraction through a superior conventional and laser-assisted approach was ineffective. The use of the laser sheath through the femoral approach allowed complete removal of the migrated lead and reimplantation of a new ICD lead.

Introduction

Despite the tools/techniques innovations for pacemaker/defibrillator leads extraction, this procedure can present many tricky aspects which need to be managed by adapting our approach to the specific situation being faced.

Case report

A 67-year-old male with a single-chamber implantable defibrillator (ICD) (Marquis VR 7230, Medtronic, Minneapolis, MN, USA) was referred for an isolated right ventricular (RV) sensing issue of a 4-year-old 6 F supplemental sensing/pacing passive lead (Guidant