

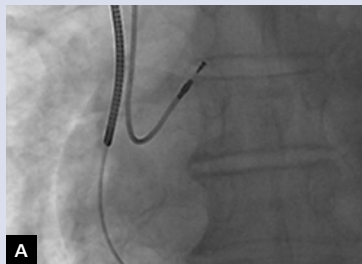
Fracture of the distal part of an implantable cardioverter-defibrillator lead two months after implantation

Złamanie dalszej części elektrody wszczepionego kardiowertera-defibrylatora po dwóch miesiącach od implantacji

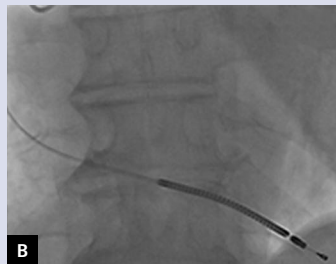
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Most lead fractures occur near the subclavian venous entry site due to compression of the lead between the clavicle and the first rib. We present a patient with a distal complete ventricular lead fracture that occurred two months after implantation. A 51-year-old man with ischaemic dilated cardiomyopathy, whose ejection fraction was 21% underwent dual-chamber implantable cardioverter-defibrillator (ICD) implantation (St. Jude Medical, DR 2377-36C ICD) in our centre. The ventricular lead and atrial lead were placed passively by using subclavian vein puncture (Fig. 1A, B). Atrial and ventricular lead impedances were 530 Ω and 740 Ω , respectively. After two months, in routine pacemaker control, the ventricular lead impedance was found to be dramatically increased ($> 3000 \Omega$). Fluoroscopy showed a complete ventricular lead fracture at the distal part of the electrode (Fig. 2A). Then extraction of the fractured lead and insertion a new ventricular lead was planned. Two days later, just before the operation, fluoroscopy showed that the fractured distal part of the lead was embolised to the distal right pulmonary artery (Fig. 2B). The fractured lead was extracted (Fig. 3) and a new ventricular lead was implanted with no complications (Fig. 4). In our patient the fracture occurred a short time after implantation. The patient stated that he used a chainsaw to cut wood about one month after pacemaker implantation. It was thought that this severe physical activity, which could generate intense vibration, could result in lead fracture. Our case documented that fracture may occur in any segment of the lead, so routine pacemaker control should be made carefully. In the presence of any problem that indicates lead fracture, leads must be investigated with fluoroscopy.



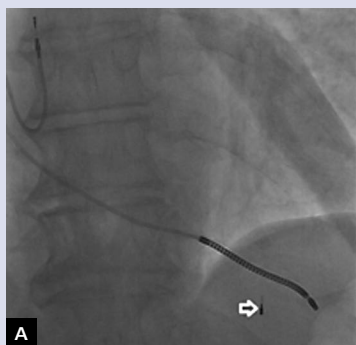
A



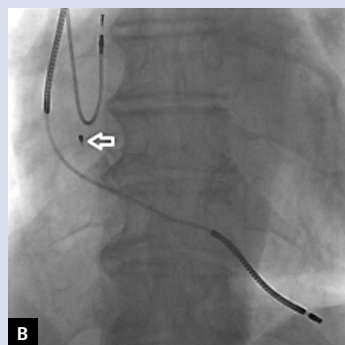
B



Figure 3. Macroscopic view of the fractured lead



A



B

Figure 2. A. Complete ventricular lead fracture at the distal part of the electrode; B. Embolised distal part of the lead to the right pulmonary artery

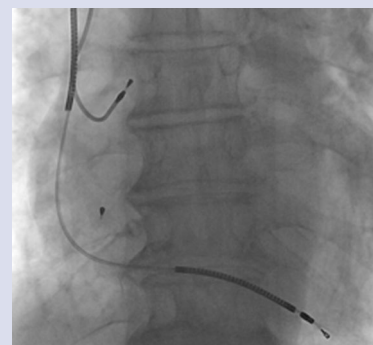


Figure 4. Implanted new ventricular lead

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Conflict of interest: none declared

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