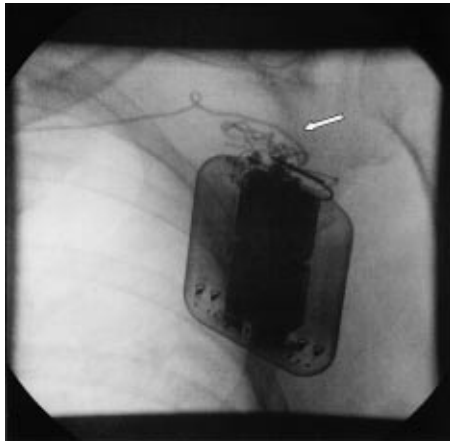


Multiple inappropriate defibrillator discharges due to Twiddler's syndrome**Fig. 1****Fig. 2**

A 56-year-old man with a history of prior myocardial infarction, ischemic cardiomyopathy and nonsustained episodes of ventricular tachycardia had received a subpectorally placed implantable cardioverter-defibrillator (ICD) (Medtronic Micro-Jewel II® 7223 Cx with a single-coil electrode Medtronic Sprint® 6932) for primary prevention of sudden cardiac death three years ago.

He was referred to our department after having received twenty-five inappropriate shocks. Interrogation and testing of the device revealed exit-block; incorrect sensing could easily be reproduced and visualized in the ICD's marker channel by shaking the ICD can. The patient denied tampering with the device, had no history of recent weight loss, psychiatric illness or any other obvious condition with which rotation of the device could be associated.

Chest x-ray revealed knotting of the lead just distally of the ICD header (Fig. 1) and multiple twisting of the lead on its way through the anonymous vein. Twiddler's syndrome with multiple kinks could be confirmed intraoperatively (Fig. 2). The lead was extracted and the whole system replaced.

Twiddler's syndrome, originally described in a pacemaker patient by Bayliss in 1968 [1], denotes a complication in pacemaker and defibrillator patients, in which manipulation with the device leads to twisting of can and electrodes with the consequence of lead displacement. While most of the patients persistently deny manipulation with the device, this is the accepted mechanism leading to lead dislodgement. Previously reported factors that may predispose to device rotation include advanced age, female gender, obesity, small size of the device relative to its pocket and psychiatric disease. Fortunately, Twiddler's syndrome is a rare complication in ICD patients, however, it may lead to severe complications such as inappropriate shock delivery, which itself may cause ventricular fibrillation, or unrescued sudden cardiac death. Despite the fact that only a small number of Twiddler's syndromes in subpectorally implanted devices have been published so far [e.g. 2, 3], it cannot be reasoned that ICDs in this position are less predisposed to twiddle.

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Key words: Twiddler's syndrome, implantable cardioverter-defibrillator.

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