

[EDITORIAL]

A Trick for a Dislodged Atrial Pacemaker Lead

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Cardiac pacemakers emerged more than 60 years ago and are now one of the most well established artificial organs. Pacemaker-related complications are acceptable and they can mostly be resolved by minor interventions. The dislodgement of a pacemaker lead is one of the common complications and its incidence is estimated range from around 1-3% (1). An active fixation lead is usually applied to avoid this complication, and a J-shaped passive fixation lead is sometimes utilized, especially for atrial pacing to prevent other complications, such as perforation or cardiac tamponade. Aizawa Y et al. experienced the dislodgement of a J-shaped passive fixation atrial lead in a 95-year-old female with a high-degree of atrio-ventricular block (2). Although physiological DDD pacing is normally recommended in such cases to achieve a better hemodynamic effect, the performance of repositioning surgery may increase the risk of a device-related infection (3, 4). Yoshida N (5) and Ekizler FA (6) have reported percutaneous repositioning methods using a deflectable catheter for a dislodged J-shaped atrial lead to avoid any subsequent infectious complications and to offer a more tolerable procedure for the elderly. These techniques are applicable only for J-shaped passive fixation atrial leads. However, a dislodged lead was observed to spontaneously reposition itself into the right atrial appendage, and the atrial sensing and pacing capability was thereby restored in the one patient reported by Aizawa Y (2). This surprising phenomenon is extremely rare, and its mechanism is unknown. Even in patients in whom an early invasive reoperation cannot be performed because of either the pa-

tient's refusal or frailty, this phenomenon means that there is hope in such cases for a spontaneous resolution of the problem.

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References

1. Wang Y, Hou W, Zhou C, et al. Meta-analysis of the incidence of lead dislodgement with conventional and leadless pacemaker systems. *Pacing Clin Electrophysiol* **41**: 1365-1371, 2018.
2. Aizawa Y, Konno R, Kawamura A. Spontaneous repositioning of a dislodged atrial pacemaker lead. *Intern Med* **61**: 127-128, 2022.
3. Krahn AD, Lee DS, Birnie D, et al.; Ontario ICD Database Investigators. Predictors of short-term complications after implantable cardioverter-defibrillator replacement: results from the Ontario ICD Database. *Circ Arrhythm Electrophysiol* **4**: 136-142, 2011.
4. Prutkin JM, Reynolds MR, Bao H, et al. Rates of and factors associated with infection in 200 909 Medicare implantable cardioverter-defibrillator implants: results from the National Cardiovascular Data Registry. *Circulation* **130**: 1037-1043, 2014.
5. Yoshida N, Yamada T, McElderry HT. Successful percutaneous repositioning of a dislodged pacemaker lead. *Europace* **16**: 148, 2014.
6. Ekizler FA, Cay S, Ozeke O, Ozcan F, Aras D, Topaloglu S. Transvenous retrograde reposition of an atrial lead. *Pacing Clin Electrophysiol* **42**: 1493-1495, 2019.

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