A case of suspected the lead fracture from a sudden increase of the battery impedance

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Introduction: A case is 69 years old female who had a dual-chamber pacemaker that had been implanted in March 2007 for a high-grade atrioventricular block. The generator was St. Jude Medical Identify ADxXLDR5386 and the ventricular lead was the same company's IsoFlex S1646.

Methods: When she received a regular pacemaker check in June 2015, a battery impedance was 3.3kohms. However, 12 months later, in June 2016, a sudden increase in the battery impedance was recognized that was 15.8kohms. The pacemaker exchange was performed immediately.

Result: In the examination of the ventricular lead at the time of the exchange, a threshold of the ventricular lead fluctuated significantly from measurement to measurement. A lead fracture was suspected from a fluoroscopic image and decreasing a ventricular lead impedance and sensitivity. An additional insertion of a new ventricular lead was accomplish after confirming that a existing vein was not obstructed. Also from a generator inspection by the manufacturer, a rapid increase in the battery impedance was interpreted to result from a high output pacing accompanying the Autocapture setting caused by the threshold fluctuation due to the lead fracture.

Conclusion: We report because there are few reports of the sudden increase of the battery impedance caused by the lead fracture.