

## Images in Congenital Heart Disease

### Two twiddlers

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**A**N 18-YEAR-OLD NORTH AMERICAN ABORIGINAL female received an epicardial pacing system for symptomatic sick sinus syndrome at 7 years of age. Coarctation of the aorta had been repaired in infancy, and she also had a non-obstructive supramitral ring. The epicardial system was replaced when she was 12 years old, and a transvenous dual chamber pacing system was implanted at the age of 16 years. Chest X-ray at this time (Fig. 1) demonstrated satisfactory position of the leads. Two years later, the patient complained of intermittent right diaphragmatic pacing. A repeat chest X-ray (Fig. 2) now showed tension on the ventricular lead

and dislodgement of the atrial lead, both of which were coiled around the generator box.

A second North American aboriginal female presented with syncope two years after implantation of a single chamber transvenous pacing system, also for sick sinus syndrome. Lead impedance had increased dramatically from 708 ohms to 2922 ohms. In contrast with the immediate postoperative film (Fig. 3), chest X-ray revealed the pacemaker pack over the lower chest, with tension and braiding of a fractured lead (Fig. 4). Each patient underwent successful repositioning or replacement of her lead with further fixation of the battery pack.

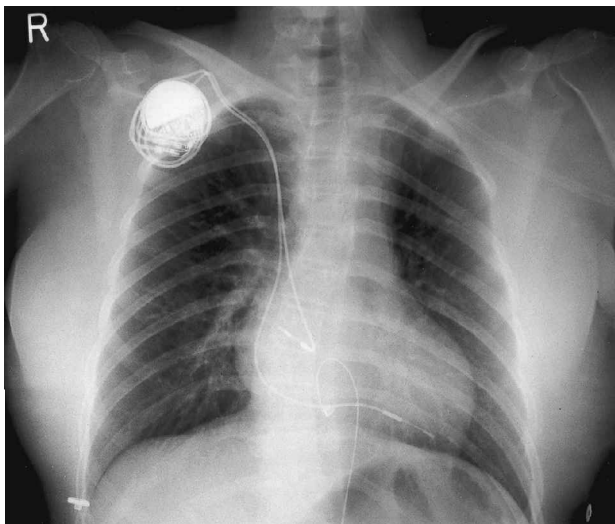


Figure 1.

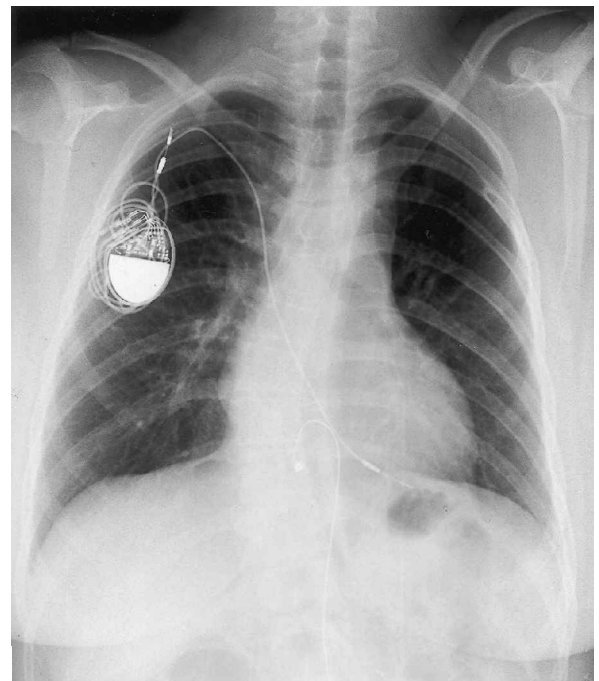


Figure 2.

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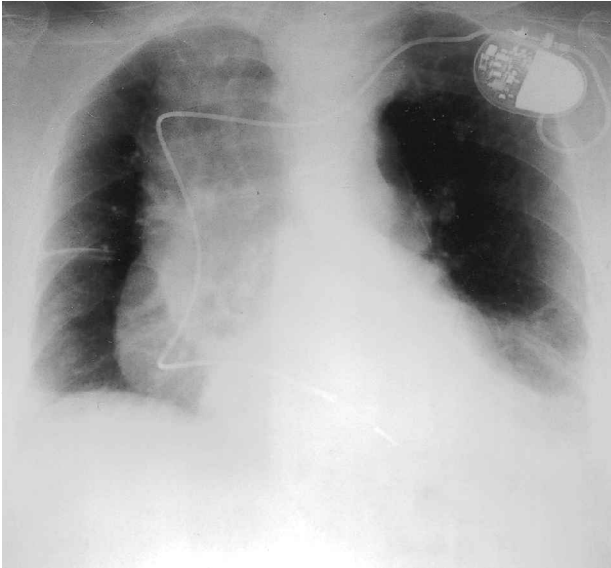


Figure 3.

Although uncommon, lead fracture or dislodgement by repeated manipulation of the power pack (“twiddler’s syndrome”) is a well-recognized cause of pacemaker failure. The vast majority of twiddlers are elderly females, in which regard the second patient, at 92 years of age, was the more classical. Both the young lady, and the lady who was young at heart,

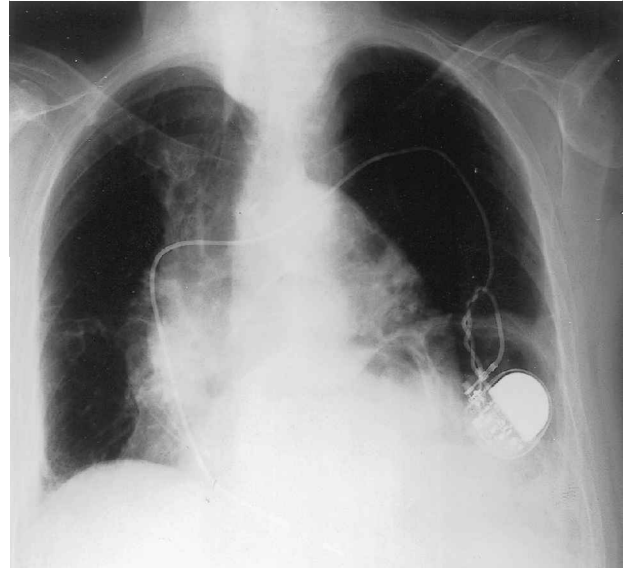


Figure 4.

staunchly denied manipulation of their generators, which is also typical of twiddler’s syndrome.<sup>1</sup>

#### Reference

1. Chernilas JZ, Bilfinger TV, Vlay SC. Pacemaker twiddler’s syndrome. *Pace* 1996; 19: 2158–2159.