



IMAGE IN CARDIOLOGY

## Twiddler's syndrome, a rare cause of pacemaker malfunction



### Síndrome de Twiddler, uma causa rara de disfunção de sistema de *pacings*

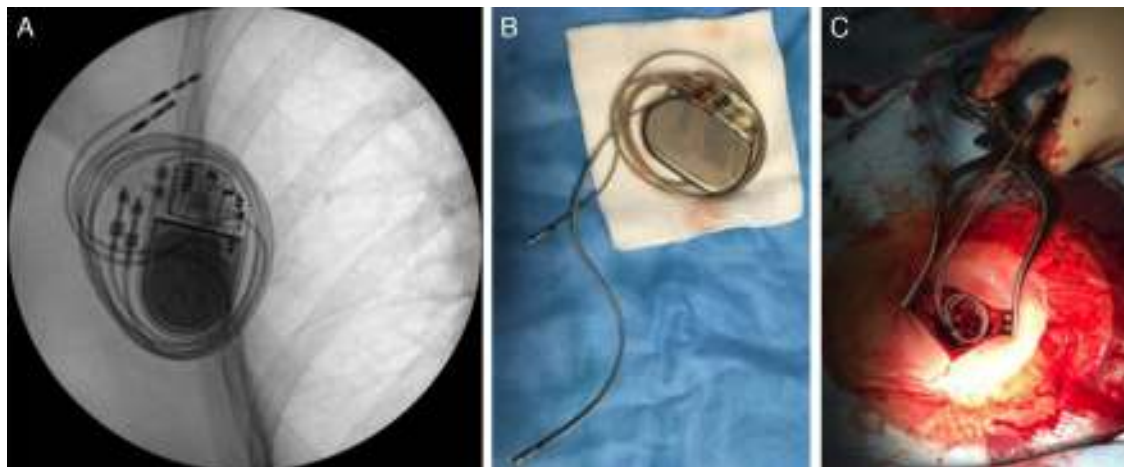
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A 68-year-old female with a previous history of breast cancer treated by left mastectomy, chest radiotherapy and systemic chemotherapy was admitted to our cardiology department for syncope due to intermittent complete heart block and underwent right-sided dual-chamber pacemaker implantation using active fixation leads.

Three months after the procedure the patient was asymptomatic, but a pacemaker malfunction was detected with loss of pacing and sensing of both atrial and ventricular leads. A chest X-ray was performed which revealed coiling of the pacing leads around the pulse generator (Figure 1A). A diagnosis of twiddler's syndrome was made. The patient



**Figure 1** (A) Chest X-ray showing coiling of the pacing leads around the pulse generator; (B) removal of the pacing system with the leads coiled around the pulse generator; (C) in-situ anti-manipulation fixation.

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underwent surgical revision of the pacemaker pocket and the pacing system was removed (Figure 1B). A new pacemaker was implanted and anti-manipulation fixation was performed to prevent recurrence (Figure 1C).

### **Ethical disclosures**

**Protection of human and animal subjects.** The authors declare that no experiments were performed on humans or animals for this study.

**Confidentiality of data.** The authors declare that no patient data appear in this article.

**Right to privacy and informed consent.** The authors declare that no patient data appear in this article.

### **Conflicts of interest**

The authors have no conflicts of interest to declare.