



# An Unexpected Intermittent Repetitive Audible Alert Just After Replacement of an Implantable Cardioverter-Defibrillator

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An elective implantable-cardioverter defibrillator (ICD) replacement (Visia AF VR, Medtronic, Madrid, Spain) was performed in a 57-year-old woman. The first device (MAXIMO II VR, Medtronic) had been implanted for secondary prevention in the setting of nonischemic cardiomyopathy. Several months before ICD replacement, the patient was diagnosed with left-sided breast cancer and underwent mastectomy, with placement of a breast tissue expander (Natrella 133plus, Allergan S.A., Madrid, Spain) for later breast reconstruction. The ICD replacement was performed on an outpatient basis uneventfully, but shortly afterward, the patient reported that repetitive intermittent audible tones could be heard coming from the device, but only when she leaned forward. Interrogation of the device was unremarkable, but the patient clearly identified the audible tones as those that occurred when the head of the programmer was placed over the device. Moreover, this was reproduced at the clinic while the patient adopted a forward-leaning position, with no disturbances in intracardiac electrogram tracings.

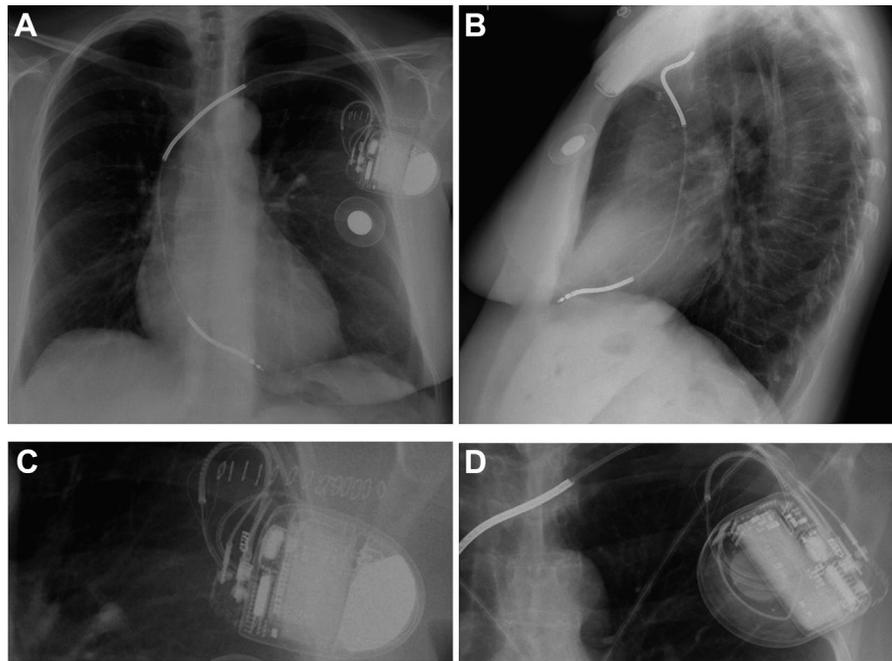
A chest radiograph revealed a radiopaque object just below the ICD (**Figures 1A and 1B**), which corresponded to a magnetic port of the tissue expander. Thus, the phenomenon was due to the close proximity of the generator to the magnetic port of the breast tissue expander, which led to transient magnet interference in the ICD. After ICD replacement in the same pocket, the position of the new generator (**Figure 1C**) was slightly different from the previous one (**Figure 1D**), and as a result, in the forward-leaning position, the magnetic port came close enough to the ICD to cause magnetic interference, which triggered the audible tone, something that did not happen with the previous implantation. In patients with cardiac implantable electronic devices, the magnet port of some breast tissue expanders can produce device interference that enables a magnetic response of the device (tachycardia detection is suspended in all ICDs, and hence, no anti-tachycardia therapy occurs), which puts patients at risk. Alternative breast tissue expanders with no magnetic port exist and should be placed in these patients.

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**FIGURE 1** Chest Radiographs After and Before ICD Generator Replacement



Posteroanterior (A) and lateral (B) chest radiographs after ICD generator replacement. Detail of the posteroanterior chest radiograph showing the orientation of the generator after (C) and before (D) ICD replacement. ICD = implantable-cardioverter defibrillator.

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