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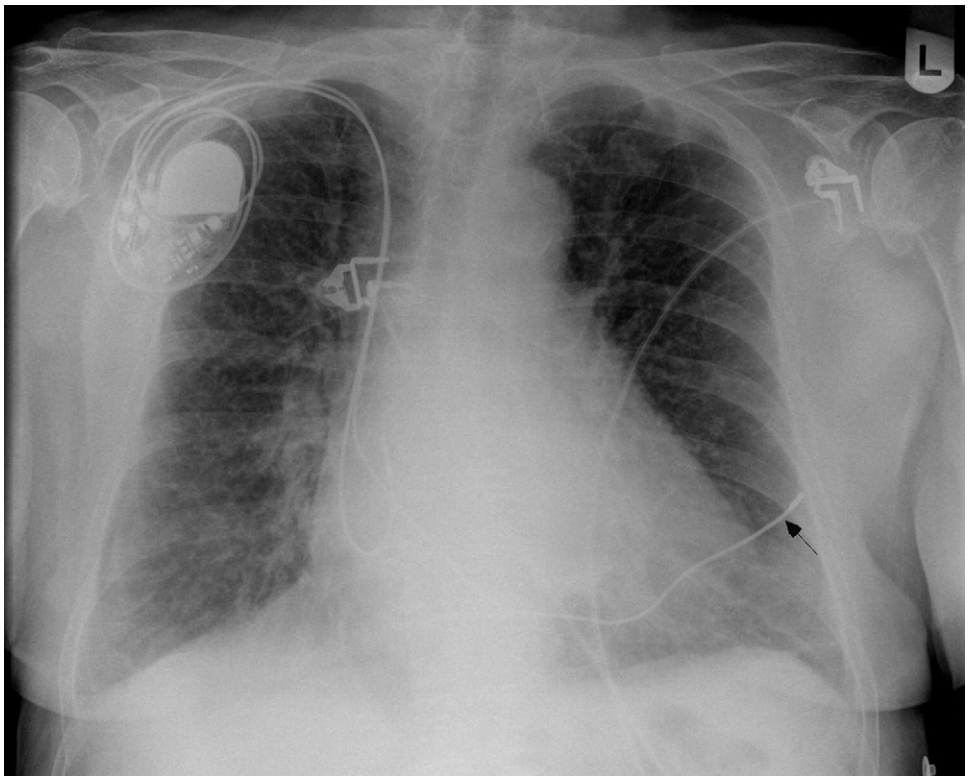

Figure. Chest radiograph posterior-anterior. Arrow showing the displaced ventricular electrode. Used with permission of Manja Bock, MD, Department of Medicine/Cardiology, Heart Center, Dresden University of Technology, Fetscherstr. Dresden, Germany.

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An 86-year-old woman was admitted to the hospital with chest pain lasting for 1 day. Five weeks ago in an external hospital, a 2 chamber-pacemaker system had been implanted because of a sick sinus syndrome. It was reported that the implantation procedure had been unproblematic.

Clinical examination showed an age-related normal physical state. The pacemaker pocket was bland, without any signs of infection. Laboratory analysis results, including the levels of troponin, creatine kinase, D-dimers, and peripheral blood cell count, were found to be normal.

Pacemaker interrogation revealed an ineffective pacing and insufficient sensing of the ventricular lead.

The chest radiograph (Figure) showed the ventricular pacemaker lead tip lying close to the left thoracic wall, without any signs of pneumothorax or hemothorax. Using echocardiography pericardial effusion, cardiac tamponade or a perforation of the tricuspid valve or the interventricular septum could be excluded.

For the diagnosis and teaching points, see page 488.
To view the entire collection of Images in Emergency Medicine, visit www.annemergmed.com

pearls relevant to the field of pediatric emergency medicine. This manual, measuring 5 ¼ inches by 3 ½ inches, is both portable and powerful. It is organized into 30 sections, based on organ system, physiology, and environmental parameters. The challenge with any book of this size is to make the reading useful without compromising content or attempting an all-inclusive approach, making rapid search much more difficult. Health care providers working in an emergency department environment need to access pertinent data quickly. To this effect, *Tarascon Pediatric Emergency Pocketbook* does a nice job presenting the requisite information.

I was impressed when I found intussusception listed as a cause of altered mental status. The tables are well organized and easy to read, with guidelines and references provided throughout. Equipment sizes, including LMAs, are appropriately listed. Looking up information was easy, from the correct method of tick removal to medications used for rapid sequence intubation. I especially appreciated the section on toxicology. I found the sections on blood products and replacement factors to be particularly helpful. There is a timely section dedicated to Chem-Bio-Rad exposures.

My criticisms are few. At times, the content of the pocketbook resembled another popular general pediatric handbook, providing information on childhood immunizations, growth and development, and nutrition. I would have preferred a limited focus on medical and surgical emergencies. The infectious disease-based medication formulary is convenient but there are more complete pediatric drug references available. Therapy for septic shock is divided into cold shock and warm shock, physiologic generalizations that may not always be easy to distinguish. Finally, the small text size may pose a challenge to some.

The key to using manuals which summarize or list content is already knowing something about the information which one seeks. This manuscript may be best suited for those professionals who work or train in an emergency or urgent care environment and need brief descriptions of medical facts to prompt recall of medical information already learned. This writing should not be used to replace more traditional textbook or Web-based sources. *Tarascon Pediatric Emergency Pocketbook* will serve as a valuable tool to assist you in the care of children and represents current standards in this specialty. The author has excelled in compiling a large body of information and composing this knowledge into a useable reference guide that promptly aids the physician in clinical decisionmaking for emergency pediatric conditions.

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IMAGES IN EMERGENCY MEDICINE
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DIAGNOSIS:

Perforation of the right ventricle and lung parenchyma by a pacemaker lead. The lead was surgically removed and a new passive ventricular electrode was inserted. There was no evidence of bleeding into the pericardial space, and no further complications occurred. Pacemaker interrogation, chest radiograph, and echocardiography the day after the operation showed no problems.

The present case shows an extraordinary incident of an injury caused by a pacemaker lead perforation 5 weeks after the implantation. Dislocations as obvious as in that patient occur only rarely. Even more unexpected is the fact that neither a pericardial effusion nor a pleural effusion was observed.

In patients with implanted pacemakers and defibrillators, perforation of a lead should always be considered as a possible cause of recently developed chest pain, although it is a rare complication. Usually, cardiac tamponade because of perforation caused by a lead occurs shortly after implantation. Few cases report a subacute or delayed (>1 month after procedure) perforation.[1] Clinically, patients present with chest pain, dyspnea, or convulsion of the chest wall muscles or with even more severe symptoms caused by pneumothorax, hematothorax, or pericardial effusions.

In most cases, dislocations through the myocardium but with subepicardial location are difficult to diagnose from a radiograph. If standard techniques do not yield a definitive diagnosis, computed tomography for locating the leads is necessary.[2]

REFERENCES

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2. Henrikson CA, Leng CT, Yuh DD, et al. Computed tomography to assess possible cardiac lead perforation. *Pacing Clin Electrophysiol*. 2006;29:509-511.