Peritoneal Migration of Epicardial Pag



Peritoneal Migration of Epicardially Placed Pacemaker

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Abstract

There are several reports of pacemaker migration from the site of implantation. Pacemakers can erode the skin and become exposed, migrate toward the axilla or breast and protrude from the abdominal wall into the peritoneal cavity. Intraabdominal migration of an epicardial pacemaker generator is a rare but potentially life-threatening complication. We report a case of a 53- year-old woman in whom the generator silently migrated from the sheath of the rectus abdominis muscle in the upper abdominal wall down into the peritoneal cavity. (*Iranian Heart Journal.* 2002, 2003; 3(2&3): 59-60)

Keywords: epicardial pacemaker < migration < arrhythmia

Case Report

A 53-year-old woman with a documented history of sick sinus syndrome and epicardial pacemaker implantation presented with several episodes of syncope, presyncope and dizziness. She was referred to our pacemaker clinic by her clinician for pacemaker programming. On pacemaker interrogation, no device was found at the site of implantation or adjacent abdominal area and chest. Thus, a chest x-ray and a plain abdominal film were requested.

On CXR, only a remnant of the previous endocardial lead was seen (Fig. 1).

On the abdominal film, a pacemaker generator with a fractured lead was seen in the pelvic cavity (Fig 2).

Fig. 2. Abdominal film reveals that dislocated pacemaker has fallen into the pelvic cavity with attached lead.

After admission to the emergency department, a transvenous temporary pacemaker was implanted immediately. A review of the patient's past history showed that she had six previous operations for pacemaker implantations and complications. These procedures included four operations for pacemaker erosion and one operation for pacemaker-

Fig. 1. CXR shows retained remnant of previous endocardial pacemaker generator.

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related bacterial endocarditis with *Klebsiella* and a relatively large vegetation on the tricuspid valve and pacemaker lead. In the sixth operation, an epicardial pacemaker was implanted beneath the rectus abdominis muscle.

A physical examination showed a slow heart rate and hypotension. Cardiac auscultation revealed a slow and irregular heart rhythm. Laboratory tests were normal. ECG showed AF rhythm with slow ventricular rate (35-40 beats/min, Fig. 3).

Fig. 3. ECG showed AF rhythm with slow ventricular rate due to loss of pacing beats following lead fracture, and generator migration into abdomen.

Discussion

Intraperitoneal migration of an epicardial pacemaker is a rare complication with unknown mechanisms. Of course, several hypotheses have been suggested for this phenomenon, the most interesting of them being pacemaker allergy and pacemakerrelated infection. Our patient had a history of both pacemaker infection and noninfective pacemaker erosions in the prepectoral site.

This patient had no symptoms regarding the position of the pacemaker in the pelvic cavity, but there are reports of intestinal obstruction,⁵ chronic diarrhea, abdominal discomfort³ and femoral nerve stimulation due to intraperitoneal migration of pacemaker generator.¹ The abdominallydisplaced generator was removed and substituted with a gold-plated one in order to decrease the susceptibility of her allergy to pacemaker components.

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