Cardiol Young 2006; 16: 602–603
© Cambridge University Press
ISSN 1047-9511
doi: 10.1017/S1047951106001181

Images in Congenital Heart Disease

Life threatening complication of a migrating intra-peritoneal pacemaker generator

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Keywords: Epicardial pacing; paediatric; intestinal perforation

There is a steady increase in the number of permanent pacemakers implanted in children. Typical complications are exhaustion of the batteries, fracture of the leads, and dislocation of the electrodes.[1] Migration of an intra-abdominal generator is rare, but may lead to life-threatening complications. We have now encountered this problem in a girl in whom a permanent epicardial pacemaker was implanted because of atrioventricular block following a neonatal arterial switch operation combined with closure of a ventricular septal defect. The intra-abdominal generator was exchanged at the end of the life of the battery at the age of 8 years. A new generator was placed into the upper peritoneum, fixing it to the inner abdominal wall, as it proved impossible to create a posterior rectus sheath in this skinny patient. An abdominal X-ray showed that the generator was properly positioned in the upper abdomen. After a period of 11 months, the patient was admitted to hospital after a 3-week history of abdominal pain with fever, and presented with signs of acute abdominal distress. Despite her slim constitution, the generator could not be detected at physical examination. The head of the pacemaker programmer had to be positioned over

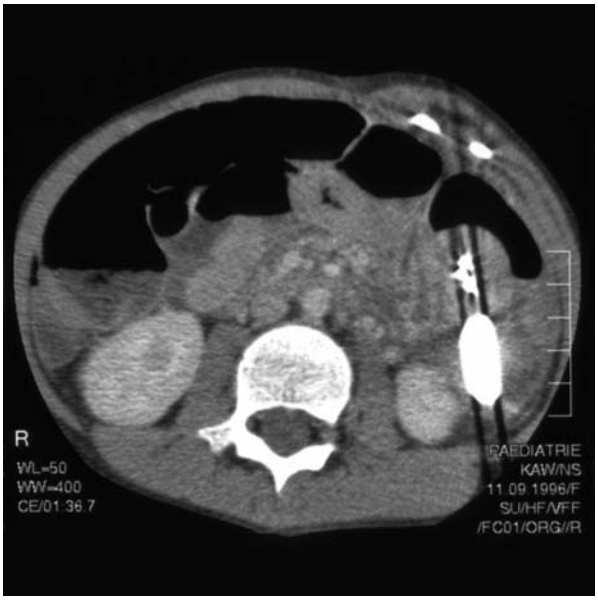


Figure 1.

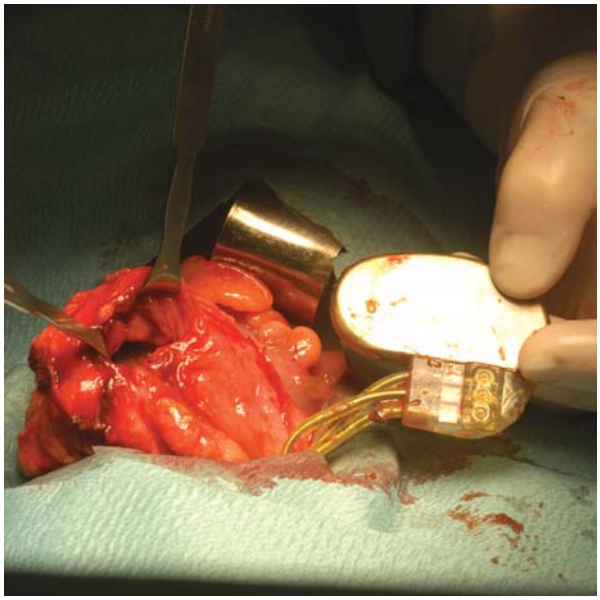


Figure 2.

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Accepted for publication 3 February 2006

https://doi.org/10.1017/S1047951106001181 Published online by Cambridge University Press

the lower left abdomen, where it proved possible to detect slightly elevated ventricular lead impedance. Abdominal computed tomography revealed free air within the abdomen, and showed that the generator had migrated into the lower left abdominal cavity (Fig. 1). During emergency laparatomy, the generator was extracted from the descending colon (Fig. 2). A new generator with an endovenous lead was placed into a left-sided infra-clavicular sheath. We recommend immediate repositioning if a generator is observed in an abnormal position. Our experience shows that a migrating intra-abdominal generator may cause mechanical ileus, with intestinal obstruction, or even intestinal perforation.

Reference

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https://doi.org/10.1017/S1047951106001181 Published online by Cambridge University Press