CASE REPORT

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A case of total pacemaker extrusion

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Pacemaker extrusion is an extremely rare but serious complication. It is a consequence of an infection and/or small pacemaker pocket. We report a case of a total pacemaker extrusion due to a small pulse generator pocket.

Pacemaker extrusion, a consequence of infection or small pulse generator pocket, is a rare but very serious complication described in a few recent reports.[1–3] We observed a case of total pacemaker extrusion of 10-years duration.

Case report

A 72-year-old woman underwent uncomplicated pacemaker implantation elsewhere for management of sick sinus syndrome, 10 years before presenting to our pacemaker department. Although the original implantation procedure had been uncomplicated, the patient found follow-up visits to be unnecessary and remained unconcerned when the pulse generator extruded through the skin, hanging onto the electrode, and kept it in place by attaching it to her underwear with a bandage.

The patient finally reported to her primary care physician complaining of intermittent palpitation and requested to be hospitalized for re-implantation of her pacemaker. Upon admission, she presented with neither fever nor other manifestations of systemic or local infection. The pulse generator was totally extruded out of its pocket (*Figure 1*). An electrocardiogram revealed the presence of a junctional escape rhythm at a rate of 35–40 bpm.

Figure 1 Complete pacemaker extrusion out of its right subclavian pocket.

The extruded pulse generator was explanted. The electrode was cut at its entrance point into the cephalic vein, and reconnected to a new pulse generator, using an A1-N adaptor. The device was re-implanted in a new ipsilateral pocket, behind the major pectoral muscle, after the excision of the skin edges at the extrusion point. Prophylactic antibacterial treatment with ciprofloxacin was administered, in a dose of 500 mg po, twice daily for 5 days. The patient was followed for 3 months at our pacemaker department by the implanting physician who confirmed the complete healing of the wound and proper pacing functions. Her interim care was assumed by a regional pacemaker centre until February 2009, when the patient was asked to return to our department for a follow-up visit, 2.5 years after re-implantation of her pacemaker. That examination confirmed the persistence of a normally healed pulse generator pocket and normal functions of the pacemaker.

Comment

The estimated, long-term incidence of total extrusion of pacemaker or implantable cardiac defibrillator pulse generators out of their pocket, a major secondary complication of infection, is 1%. Cultures from the wound have generally recovered *Staphylococcus* species.[1,3] Factors contributing to the risk of skin erosion include poor hygiene and low socio-economic status. Neglected early stages of skin erosion may cause more serious complications. A cause of complete pacemaker extrusion is pressure necrosis due to a small pulse generator pocket, as illustrated by our case.

Conflict of interest: none declared.

References

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