Complications Related to Implanted Pacemaker

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The use of permanent pacemakers(PM) and other electrophysiologic devices continues to grow with aging of the general population and expanding indications. Most of those procedures are being performed by cardiologists through transvenous approach, out of surgeons' hands. For young surgeons, the experience is limited even with decreasing incidence of surgically induced AV block. However, there is still room for epicardial approach especially in small children. I will address possible complications related to the device focusing on the surgical implantation. Pitfalls and safeguards will be discussed in the lecture.

Death early after pacemaker insertion is unusual, and when it occurs it is usually due to coexisting cardiac problems. (30-day mortality 2.7%) The rate of acute complications of pacemaker insertion is 4-5% and mostly related to operator experience. The incidence of late complications has been reported as 2.7%. Pocket related complications may include wound dehiscence, infection, pain or discomfort, skin erosion, and device migration. Lead related complications may include malposition, electrode dislodgment, conductor failure, and insulation failure. Issues related to device function include over/undersensing, crosstalk, and pacemaker syndrome.

Pediatric cardiac surgeons should be prepared for performing the procedures safely in spite of limited experience. To be aware of PM complications is an essential first step for good clinical practice in this area. With a clear understanding of potential complications, and a meticulous approach to the implant, the incidence of complications can be minimized.