



Pathology & Biology Section – 2005

G16 Defibrillator/Pacemaker Evaluation in the Los Angeles County Medical Examiner Office

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After attending this presentation, attendees will be updated on the usefulness of soliciting cardiology consultations on deaths involving Implantable Cardioverter Defibrillator (ICD)/Implantable Pulse Generator (IPG) (pacemaker) as they relate to determination of cause/manner of death; and will be provided guidelines on disposition of equipment.

This presentation will impact the forensic community and/or humanity by providing examples of quality evaluation on implanted ICD and pacemakers. Mortuaries/medical examiners/coroners are provided with vital information related to their safety in handling decedents with implantable ICD/pacemakers, and disposition of same.

LA County Coroner's Office uses the services of a cardiologist/ electrophysiologist to conduct forensic evaluations of implanted defibrillators/pacemakers. In some cases the device is explanted by the medical examiner and the cardiologist conducts interrogation with the programmer testing of the pulse generator. This provides information of device function, events, and whether the battery is depleted.

In other cases the device and lead system is intact in the decedent, in which case the integrity of the lead system can be verified by the cardiologist with similar interrogation techniques. The cardiologist also reviews the clinical records and pacemaker tracings, and provides opinions on the pacing system.

Implantable cardioverter defibrillators have to be turned off using a programmer to prevent morticians getting a shock. Pacemaker and ICDs should be removed prior to cremation because of sealing techniques, they will rupture during cremation due to pressure buildup.

In California, the IPG/ICD is the property of the family. If removed for evidentiary and cause of death reasons they have to be returned to the family or, after testing is completed, disposition by the coroner needs family consent. They cannot be reused or refurbished, as U.S. Federal law prohibits it. Nuclear pacemaker must be removed to satisfy nuclear regulatory agency requirements for 100% removal of all radioactive modules. Pacemakers have been used for identifying decedents. Several case examples from the LA County Coroner will be discussed. A newly developed pacemaker policy will be shared.

Pacemaker Evaluation, Cardiology Consultation, Defibrillator Disposition