5J - IMPLANTABLE CARDIOVERTER/DEFIBRILLATOR (ICD) MANAGEMENT ADULT & PEDIATRIC

PARAMEDIC

Clinical Pearls:

1. Correlate ICD activity with ECG rhythm - ventricular fibrillation/tachycardia?

2. Due to the variety of ICDs, manufacturers supply patients with a card to be carried (usually in wallet or purse) that identifies the ICD by manufacturer, type, and date of implantation.

3. All ICDs have pacemaker function. Some patients have pacing indications and may have normal or abnormal pacemaker function (see 5I – Pacemaker Management) associated with their ICD. Many patients with ICDs, however, do not have a pacemaker indication.

4. Specific types of ICD malfunction include the following:
   a. Inappropriate ICD shocks – Patient is shocked without evidence of arrhythmia (examples, lead fracture, oversensing of t-waves)
   b. Failure to shock ventricular tachycardia/fibrillation - (examples, undersensing of small fibrillatory waves, slow ventricular tachycardia below the ICD's programmed VT zone)

5. If the patient is hemodynamically stable, acquire and transmit a 12-Lead ECG prior to attempting any change in ICD function.

6. In the setting of oversensing, especially if multiple apparently inappropriate ICD discharges occur, the ICD may be temporarily deactivated by placing a doughnut-shaped medical magnet over the ICD generator. Depending upon the exact model of ICD, a beep or sustained tone may be heard with successful magnet application.

7. While the magnet is applied to the ICD, no therapies will be delivered – even when needed for life-threatening arrhythmias. Therefore, PRIOR TO DEACTIVATING AN ICD WITH A MAGNET, THE PATIENT MUST BE ON CONTINUOUS ECG MONITORING AND A DEFIBRILLATOR MUST BE IMMEDIATELY AVAILABLE.

8. In the setting of cardiac arrest, treat per usual resuscitation, but avoid placing defibrillation pads over the ICD generator.

9. **Consult on-line medical control early in the course of suspected ICD management issues for further guidance.**