

Anesthesiology Rounds
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Automated Implantable Cardioverter Defibrillators

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Objectives: This issue will help the reader to:

- Understand the function of automated implantable cardioverter defibrillators (ICDs)
- Know the indications for ICD therapy (ie, for primary prevention and specific conditions)
- Become familiar with different surgical procedures that can cause electromagnetic interference
- Know how ICDs react with magnets.

Questions: (only one response is correct)

1. After detection of ventricular arrhythmia, the most important function of an ICD is:

- antitachycardia pacing
- cardioversion
- defibrillation
- all of the above

2. Which one of these is a Class 1 recommendation?

- idiopathic ventricular fibrillation
- spontaneous VT with structural heart disease
- syncope of undetermined origin where drug therapy ineffective
- syncope in a patient with advanced structural heart disease in whom investigations have failed to define a cause

3. In a patient with hypertrophic cardiomyopathy, which of the following is not a major risk factor?

- ventricular fibrillation
- spontaneous sustained ventricular tachycardia
- left ventricular outflow obstruction
- familial history of sudden death

4. Which one of the following procedures does not cause EMI (electromagnetic interference):

- surgery with use of electrocautery
- external cardioversion/defibrillation
- magnetic resonance imaging
- CT scan

5. When a magnet is placed over the ICD generator:

- tachyarrhythmia therapy is not affected
- tachyarrhythmia therapy is activated
- defibrillation therapy is deactivated
- the pacemaker function of the ICD is affected

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