INTERDISCIPLINARY CLINICAL MANUAL
Policy and Procedure

TITLE: Cardiac Implantable Electronic Device (CIED) - Endoscopic Procedures
NUMBER: CC 10-087

Effective Date: March 2014

Applies To: Holders of Interdisciplinary Manual

POLICY
1. For patient safety, it is crucial that any patient with a Cardiac Implantable Electronic Device (CIED) be identified prior to undergoing endoscopy procedures to ensure that the appropriate monitoring and precautions are in place.

DEFINITIONS
Cardiac Implantable Electronic Device (CIED):
Includes pacemakers and implantable cardioverter – defibrillator devices (ICDs).

GUIDING PRINCIPLES
1. Electromagnetic Interference (EMI)
   1.1. Electrocautery utilized during endoscopic procedures can potentially cause the CIED to inappropriately sense because of EMI.
   1.2. Possible complications include inappropriate inhibition of pacing or inappropriate rapid pacing. Inappropriate sensing and triggering of ICD therapy may also occur.

2. Principles of Magnet Use with CIEDs
   2.1. Magnet placement over a pacemaker will result in asynchronous pacing until the magnet is removed.
   2.2. A magnet placed over the ICD tells the defibrillator not to detect ventricular tachycardia/ventricular fibrillation (VT/VF) while the magnet remains in place.
PROCEDURE

Equipment

- ECG electrodes
- Cardiac monitor

1. Booking Office

   1.1. Notifies the Endoscopy Clinic when a patient that has been identified as having a CIED is booked.

2. Registered Nurse

   2.1. As part of all pre-procedural screenings and using the Endoscopy – Patient Record form (CD0639), asks the patient if they have a CIED to ensure that patients who have these devices are not inadvertently missed.

   2.2. For patients who have been identified as having a CIED, obtains the following information:

      2.2.1. Make and model of device implanted (most patients have a device identification card) and medical reason for implant.

      2.2.2. Date when the device was last interrogated.

      2.2.3. Date when the device last shocked the patient (if the device has cardioverter-defibrillator capability).

      2.2.4. Pacemaker dependency.

      2.2.5. Medications (particularly anticoagulants).

   2.3. Notifies the physician of any admission assessment concerns (i.e. vital signs outside normal limits).

3. Physician

   3.1. Assesses the appropriateness of proceeding with the procedure based on the individual patient circumstances.

4. Endoscopy Procedure

   4.1. Whenever possible assign an RN who has been deemed competent in cardiac monitoring to the patient. The RN:

      4.1.1. Connects the patient to a cardiac monitor for the duration of the procedure.

      4.1.2. For monopolar electrocautery, places the grounding pad on the leg or thigh opposite to the CIED site.

   4.2. The physician considers using one of the following possible precautions:

      4.2.1. Use of a lower setting for cautery and/or apply for shorter durations of time

      4.2.2. Use bipolar electrocautery instead of monopolar cautery.

   4.3. The RN:
4.3.1. places the curve of the magnet over the CIED when the electrocautery is activated to cauterize

4.3.2. removes the magnet by at least two feet (61cm) away from the CIED when cauterization is discontinued.

4.3.3. If magnet application greater than 30 seconds causes the ICD to beep with every heart beat followed by a long beep, consult with the ICD laboratory. (There is an uncommon type of ICD which if programmed in a nonstandard manner, stays turned off after prolonged magnet application until magnet reapplication.

5. MONITORING

5.1. The physician:

5.1.1. Determines the length of time for cardiac monitoring post procedure.

5.1.2. Retains the responsibility for monitoring and interpreting ECG rhythms at all times.

Note: CIEDs do not need to be routinely interrogated post-procedure.

REFERENCES


RELATED DOCUMENTS

Policies
CC 10-013 Cardiac Monitoring: Cardiac Rhythm Assessment and Telemetry Monitoring (PELC)

Forms
CD 0639MR Endoscopy – Patient Record

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