MR and Patients with Permanent Pacemakers

1. Information about the type and brand of pacemaker needs to be obtained and evaluated by the MR department. Most current devices are MR conditional.

2. The issue for scheduling is often the duration of time since the device was inserted. Each manufacturer specifies the duration of time following insertion before an MR should be done. The concern is for movement of the wires if the tract is not healed.

3. Cardiology does NOT need to be in the MR department when a patient with a pacemaker has an MR. The confusion has been that there needs to be someone with the patient who can do cardiac monitoring and is ACLS trained. When the patient is accompanied by an ACLS trained RN and RRT from CCTC, this covers the requirements.

4. The CCTC team should bring atropine and the external pacemaker/defibrillator in the unlikely event of pacemaker failure. They should bring the portable external pacemaker and atropine with them, just in case something fails (unlikely).

5. The patient requires ECG monitoring during the MR.

6. The pacemaker has to be put into safe mode prior to MR. **Page Cardiology** and let them know in advance of the MRI. Safe mode disables functions that may interfere with the MR magnet. EPS does not need to be called. If there is a need to contact EPS, page the EPS Consultant on call (not resident).

7. **Timing of Safe Mode**

   For Pacemakers: If the patient has a pacemaker and the patient needs pacing, the device is programmed to asynchronous pacing (fixed rate). A pacemaker placed into safe mode will ***automatically default to the normal settings 24 hours later.*** For a pacemaker only, this provides a significant amount of lead time for changing the pacemaker

   For Defibrillators: If the patient has an implanted defibrillator, safe mode will disable any tachycardia functions including defibrillation. The baseline functions will automatically be restored ***6 hours after safe mode is initiated.***

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