

Magnetic resonance imaging with side effects

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Great care should be taken when performing magnetic resonance imaging (MRI) in patients with a cardiac pacemaker. Henning Bovenschulte and his co-authors review recent findings in the latest issue of *Deutsches Ärzteblatt International* (Dtsch Arztebl Int 2012; 109[15]: 270-5).

MRI is generally contraindicated in patients with a pacemaker (PM) or an implantable cardiac defibrillator (ICD), because of the risk of life-threatening events. The devices and their sensors may interact with the magnetic fields, disrupting the cardiac rhythm. Energy builds up in the electrode leads, which act as an antenna, and is discharged into the tissues around the tip of the electrode.

The principal published studies, complemented by the authors' own data, yielded a total of 1043 patients with a PM or ICD who had undergone MRI. No life-threatening complications were observed. In 11 cases electrical resetting of the device was necessary, and a significant increase in pacing threshold was seen in 16 cases.

Despite the potential hazards, MRI is occasionally indicated in a seriously ill patient. Provided appropriate steps are taken to optimize the procedure, the benefits of MRI will clearly outweigh the risks.

More information: www.aerzteblatt.de

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