

## MAGNETIC RESONANCE IMAGING IN PATIENTS WITH CONVENTIONAL CARDIAC DEVICES - A CASE REPORT

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### INTRODUCTION

It is estimated that during their lifetime, up to 75% of patients with cardiac pacemaker (PM) develop a medical condition, such as a neurological disorder, for which an MRI may be necessary for optimal diagnosis and treatment. The evidence around conventional PM being a contraindication to MRI is controversial.

### CASE REPORT

A 73 years-old man with a cardiac permanent pacemaker for atrial flutter with slow ventricular response, presented with a 12-month history of worsening neck pain radiating to both arms, associated with paraesthesias and bilateral arm weakness. Initial neurological examination revealed bilateral brachial palsy with upper limb hyporeflexia, pyramidal signs present in lower limbs, positive Lhermitte sign and no sensation loss. A week later he became quadriparetic, losing the ability to walk, and developed urinary retention. A CT-myelogram showed an abnormally expanded cervical spinal cord, requiring further imaging by MRI. With the collaboration of a cardiologist and an anesthesiologist, the pacemaker was programmed to an asynchronous mode and the patient was successfully submitted to a 1,5T MRI scan. The device was then reprogrammed to original settings. The MRI revealed an intramedullary lesion suggestive of a spinal cord neoplasm and the patient was submitted to neurosurgical intervention.

### CONCLUSIONS

With the broad number of already existing implanted cardiac components, MRI in patients with conventional pacemaker will remain a dilemma over the next years. Based on findings from several clinical studies the risk may be lower than previously thought if a number of conditions are met and appropriate precautions are taken.