Prošireni sažetak / Extended abstract

Magnetic resonance imaging in ischemic heart disease: beyond structural analysis

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Diagnostic imaging in cardiology played an important role for continuous pace of improvements in basic knowledge and therapeutic guided decisions.[1] Magnetic resonance imaging (MRI) has recently become a resourceful armamentarium in the field of every days clinical practice. Owing to technological developments, as increased power of magnetic fields, improved software for image acquisition and postprocessing offered significantly better image quality, while the timeline of examination was shortened. Inclusion of ECG and breath gated imaging offered further improvement in imaging quality by "freezing" of the beating heart in crucial important points for diagnostic analyzes.[2] Combination of tissue characterization with functional imaging became increasingly important for clinical management of ischemic heart disease[3-5]. Adenosine based vasodilatation joined with gadolinium contrast imaging is the most frequently applied pharmacological stress for assessment of ischemic heart disease. It is particularly resourceful for objectification of symptomatology and therapeutic decisions in cases with limited or non-diagnostic information obtained from conventional diagnostics. We present the most important issues in functional perfusion imaging and methodology for detecting the viable myocardium in order to attain more successful outcomes of revascularization treatments.

KEYWORDS: magnetic resonance imaging of the heart, myocardial stress perfusion, myocardial viability.

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