

# MR STRES PERFUZIJJA SRCA V UKC MARIBOR

## MR CARDIAC STRESS PERFUSION AT THE UKC MARIBOR

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### IZVLEČEK

**Uvod in namen:** Namen prispevka je predstaviti protokol MR (angl. magnetic resonance) stres perfuzijo srca in opisati pomembnost preiskave pri pacientih z obolenji koronarnega ožilja. MR stresna perfuzija srca je neinvazivna slikovna metoda, s katero natančno ocenimo miokard, saj lahko dobro ločimo ishemične in neishemične spremembe na srčni mišici.

**Metode:** Pri 42-letnem pacientu z bolečinami v prsnem košu in mejno pozitivnim izvidom obremenitvenega testiranja pri kardiologu smo izvedli MR stres perfuzijo srca. Po opravljeni MR stres perfuzijski preiskavi srca so pacientu izvedli še koronarografijo z vstavitvijo stenta v RCA (angl. right coronary artery). Magnetno-resonančno preiskavo srca smo opravili na MR aparatu Siemens Magnetom Sola 1,5 T. Za obremenitev srca med preiskavo smo uporabili zdravilo Regadenoson (Rapiscan), ki ga apliciramo v veno.

**Rezultati:** Koronarografska preiskava je pokazala 96-odstotno stenoza RCA proksimalno. Stresna perfuzija je bila pozitivna, saj so bili prisotni perfuzijski defekti v celotni spodnji steni miokarda tako med obremenitvijo srca kot v mirovanju in na slikah poznega barvanja (angl. late gadolinium enhancement – LGE).

**Zaključek:** V univerzitetnem kliničnem centru Maribor je stres perfuzija srca pogosta in pomembna preiskava pri zdravljenju in obravnavi pacientov, ki imajo težave s koronarnimi obolenji.

**Ključne besede:** magnetna resonanca, stres perfuzija, regadenoson, adenzin, koronarna bolezen srca.

### ABSTRACT

**Introduction and purpose:** The purpose of this article is to present the magnetic resonance (MR) protocol of cardiac perfusion and to describe the importance of the study in patients with coronary artery disease. MR Stress perfusion of the heart is a noninvasive imaging modality that accurately assesses the myocardium because we can discriminate well between ischemic and nonischemic changes in the myocardium.

**Methods:** In a 42-year-old patient with chest pain and a borderline positive stress test by a cardiologist, we performed MR stress perfusion of the heart. After MR stress perfusion of the heart, the patient underwent coronary angiography, during which a stent was placed in the RCA (right coronary artery). Magnetic resonance imaging of the heart was performed on a Siemens Magnet Sola 1.5 T MR machine. To stress the heart during the examination, we used Regadenoson (Rapiscan) administered intravenously.

**Results:** Coronary angiographic examination showed 96% RCA stenosis proximally. Stress perfusion was positive, as perfusion defects were seen throughout the inferior myocardial wall during cardiac stress as well as at rest and in late gadolinium enhancement (LGE) images.

**Conclusions:** At the University Medical Centre Maribor, cardiac stress perfusion is common and an important investigation in the treatment and care of patients with coronary artery disease problems.

**Keywords:** magnetic resonance imaging, stress perfusion, regadenoson, adenosine, coronary artery disease.

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