

The heart is a hollow muscular organ. The cardiac muscle needs oxygen and nutrients for correct function. The coronary arteries patency is necessary for the high quality cardiac function.

The ischemic coronary disease is a group of disorders, that cause coronary arteries insufficiency. In consequence, coronary vessels impassability causes the various degree myocardium ischaemia, that can lead in a life threatening status.

The angiography is a term for the vessels imaging. Catheter angiography is an invasive imaging method. Coronary angiography are used for exactly stenosis determination of coronary artery and also for intervention. Computer tomography (CT) and magnetic resonance (MR) can be used for noninvasive imaging of coronary arteries, but MR coronarography is not used routinely. The perfusion myocardial scintigraphy and magnetic resonance can be used for assessment of myocardial viability. In bachelor thesis I describe all imaging methods in connection with the role of the radiographer.

The thesis aim is the comparison effective radiation dose of the coronary angiography, CT angiography and perfusion myocardial scintigraphy. The CT angiography constitutes the highest radiation dose in the average. The coronary angiography constitutes the lowest radiation dose on the contrary.