Cardiac Imaging

Study of Myocardial Viability Using Gadolinium-Enhanced Magnetic Resonance Imaging

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There are many imaging methods for the detection of myocardial necrosis. According to the recent literature[1] gadolinium-enhanced magnetic resonance imaging (MRI) is the examination of choice. The detection of necrosis using MRI has an absolute correlation with the corresponding pathologoanatomical picture.[2] In addition, it is also able to detect subendocardial necrosis that cannot be detected by other techniques.[3]

The following images show a picture of healthy myocardium 15 minutes after gadolinium administration and the application of an inversion recovery sequence (Figure 1). The healthy myocardium is visualised as black because of suppression of the myocardial signal in this sequence. Diseased myocardium (Figure 2) is visualised as a white line (arrows) because of persistence of the contrast medium in the region of scarred tissue. The coexisting healthy myocardium again appears as black. It is worth noting that with this methods the extent of the necrosis may not only be detected but also quantified.

References

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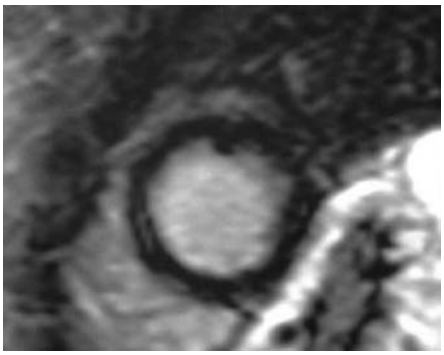

Figure 1.

Figure 2.