Neuroradiology
DOI 10.1007/s00234-015-1548-y

ERRATUM

Erratum to: State-of-the-art MRI techniques in neuroradiology: principles, pitfalls, and clinical applications

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Erratum to: Neuroradiology (2015) 57:441–467
DOI 10.1007/s00234-015-1500-1

Chapter "DTI: vibration artifact"

According to initial evidence and surgical experience, tissue stiffness as determined by MR elastography ***does not*** specifically differentiate focal cortical dysplasias from low-grade gliomas: While most low-grade gliomas appear to be soft, some may exhibit a reduced mechanical compliance. However, focal cortical dyplasias and tubera of tuberous sclerosis are expected and indeed appear to be stiff compared to unaffected brain tissue (1). This needs to be confirmed in larger studies. Note that Table-Resonance Elastography with MR (TREMR) - while being appealing for potential clinical applicability as it does not require additional external stimulator or experimental setup - is limited to MR scanners in which mechanical vibrations induced by gradient switches get transmitted to the patient table. If this is not the case, the vibrations must be generated externally and recorded by standard MR elastography sequences. The adavantage of the latter approach is that multiple frequencies can be covered more easily. Similarly, the typical vibration artifact of diffusion-weighted sequences has been observed across different vendors ***but only*** in scanners transmitting the gradient vibrations to the patient table. The artifact is not limited to DTI but affects the raw diffusion images and thus any of their postprocessing.

Andreas Bartsch, MD/PhD and Sven Haller, MD/MSc

(1) Bartsch, A. J., and Gallichan, D. (2013). Tisch-Resonanz Elastographie mit MR (TREMR) bei fokalen kortikalen Dysplasien (FCD), tuberöser Sklerose (TS) und Gliomen eine Fortsetzung. Clin Neuroradiology 23(Suppl 1): 213

The online version of the original article can be found at http://dx.doi.org/10.1007/s00234-015-1500-1.

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