MK224-ED-X

Difficult Water Imaging? An Easy and Practical Guide of Diffusion-Weighted Imaging for Radiologists

All Day Room: MK Community, Learning Center Digital Education Exhibit

Awards
Certificate of Merit

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TEACHING POINTS

Diffusion weighted imaging (DWI) is one of the more commonly used functional techniques in MRI. In this exhibit, we explain the basic physics of DWI and provide practical examples of problem-solving imaging of soft tissues, bones, and nerves.

TABLE OF CONTENTS/OUTLINE

Review basic physics of DWI: Brownian motion Basic DWI echo-planar spin-echo (EPI) sequence Technical considerations (fat suppression, timing, plane, scan strength, parallel imaging, multi-shot EPI vs single-shot EPI) The b-value and its effect on images Understanding the apparent diffusion coefficient (ADC) Artifacts Clinical applications of DWI imaging: Rules and pitfalls of ADC measurements for lesion characterization and response assessment Difference between yellow marrow, red marrow, and infiltrated marrow Whole-body marrow survey and infection Neuromuscular disease Imaging pitfalls (lipoma, hemorrhage, fibrosis)

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