

Initial clinical experience of zero TE skull MRI in patients with head trauma

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Zero TE (ZTE) skull magnetic resonance imaging (MRI) can be a possible option for clinical use in patients with skull lesions and may be helpful in managing radiosensitive trauma patients, according to a study to be presented at the ARRS 2019 Annual Meeting, set for May 5-10 in Honolulu, HI.

The study was conducted to investigate the clinical feasibility of ZTE skull MRI for evaluating skull lesions in patients with [head trauma](#), assessing its diagnostic image quality and quantitative values in comparison with computerized tomography (CT).

Thirteen patients with head trauma were evaluated using brain CT and skull MRI. Image quality assessments of the two imaging modalities were graded on a 5-point Likert scale by two attending neuroradiologists. To assess the quantitative analyses between image modalities, skull thickness and ratio of bone tissue property were measured, and interobserver reliability was measured with weighted kappa statistics and intraclass correlation coefficient.

ZTE skull MRI showed comparable diagnostic image quality to CT images for evaluating skull fracture with good correlation of quantitative measurement. Images were successfully obtained from all patients with ZTE skull MRI, and skull structures matched well with images obtained using CT scan.

The results suggest that in some cases ZTE skull MRI may be a clinical

alternative to CT imaging in patients with skull lesions and, because it does not generate radiation, ZTE [skull](#) MRI may be a useful option when imaging radiosensitive trauma patients such as children or pregnant women.

More information: www.arrs.org/am19

Provided by American Roentgen Ray Society

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