

عنوان مقاله:

Diagnostic accuracy of T2 relaxation MRI to diagnose osteoporosis

محل انتشار:

بیست و دومین همایش سالیانه پزشکی هسته ای ایران (سال: 1397)

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خلاصه مقاله:

Background: Osteoporosis is becoming an increasingly important public health issue. Osteoporosis imaging is of critical importance in identifying individuals at risk for fractures who would require pharmacotherapy to reduce fracture risk and also in monitoring response to treatment. Dual x-ray absorptiometry is currently the state-of-the-art technique to measure bone mineral density and to diagnose osteoporosis according to the World Health Organization guidelines. **Objectives:** The purpose of this study was to evaluate and comparison of T2 relaxation times in lumbar disks of osteopenia, osteoporosis and normal patients according BMD. **Methods:** Sagittal T1- and T2-weighted images and axial images were acquired in 55 patients referred for MR imaging for back pain or radiculopathy. An additional sagittal multi-echo FSE image sequence was obtained, and T2 relaxation times were calculated for each lumbar disk. T2 relaxation times were correlated with T-score and Z-score in three groups of patients. Statistical significance was tested by ANOVA and Pearson coefficients and ROC curve. **Results:** The mean age of patients was 64.4 ± 9.9 . Among studied patients there were 18.2% female and 88.8% male. T2 relaxation time according three studied groups were different. The mean of T2 relaxation time in normal, osteopenia and osteoporosis was 259 ± 49 , 385 ± 38 and 502 ± 106 . **Conclusion:** There were strong correlation between T2 relaxation time and Z-score and T-score

کلمات کلیدی:

T2 relaxation time, MRI, Osteoporosis

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