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COMPARISON OF SCINTIGRAPHY AND MAGNETIC  
RESONANCE IMAGING IN VERTEBRAL DISORDERS.  
-ESPECIALLY DIFFERENTIAL DIAGNOSIS  
BETWEEN METASTATIC BONE TUMOR AND  
SPONDYLOSIS DEFORMANCE-

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The usefulness of nuclear magnetic resonance (NMR) images in the evaluation of vertebral disorders was studied. Five normal subjects and 12 patients with various vertebral abnormalities including 8 cases of vertebral metastases and 4 cases of deformation of vertebra were examined.

On the inversion recovery images and short spine echo images (40 msec TE, 200 or 300 msec TR), all of the metastatic lesions appeared as an area of decreased signal intensity, while some of the deformed lesions appeared as high or iso-intensity.

This finding was useful in differential diagnosis between metastasis and deformation.

The  $T_1$  value in 5 normal subject was  $355.7 \pm 25.4$  msec, the  $T_2$  value was  $81.0 \pm 11.6$  msec. Although the  $T_1$  value in the lesion of metastatic patients was longer than that of the region of non-affected vertebra in patients,  $T_1$  value in deformed patients and  $T_2$  value in metastatic and deformed patients are valuable. Only  $T_1$  value was possibly useful in differential diagnosis between metastasis and deformation.

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