



MRI study of transient cerebral ischemia in the gerbil: interest of T2 mapping

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Auteur	Messenger, T [1], Franconi, Florence [2], Lemaire, Laurent [3], de Bray, J.-M. [4], Saint-André, Jean-Paul [5], Jallet, P [6], Le Jeune, Jean-Jacques [7]
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Mots-clés	Animals [8], Disease Models, Animal [9], Gerbillinae [10], Ischemic Attack, Transient [11], Magnetic Resonance Imaging [12] RATIONALE AND OBJECTIVES: The aim of this study was to evaluate the diagnostic use of MRI and, more precisely, the use of quantitative T2 imaging at 7 T for the early detection of neuronal cerebral alterations after transient ischemia in the gerbil. METHODS: One hundred forty-seven Mongolian gerbils were separated into four groups for which a bicarotid artery occlusion lasted for 4, 6, 8, or 10 minutes, respectively. The animals were scanned before carotid artery occlusion and at 3, 6, 10, 24, and 48 hours and 5 days after the ischemic incident. MR images were acquired on a Bruker Avance DRX300 mini-imaging system. RESULTS: Our results show that T2 mapping is able to localize brain damage induced by transient ischemia and to detect early perturbations in water content (as early as 6 hours after ischemia). CONCLUSIONS: T2 measurements in the striata are correlated with the severity of the ischemic incident, since the changes observed on the T2 images are directly proportional to the duration of occlusion.
Résumé en anglais	
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Liens

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