AJNR

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AJNR Am J Neuroradiol 1987, 8 (3) 571
http://www.ajnr.org/content/8/3/571.2.citation

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Letters to the Editor

MR of Hemorrhage

A recent article by Edelman et al. [1] describes how acute hemorrhage can be imaged at moderate field strengths owing to the magnetic susceptibility effects of deoxyhemoglobin, which are more readily detected when using gradient echo techniques. We have recently developed a new class of superparamagnetic MR contrast material that has magnetic susceptibility effects that mimic, but are much more potent than, those predicted in acute and chronic hemorrhage (due to hemosiderin) [2]. In evaluating the contrast material (which consists of particulate iron oxide) with a magnetometer, we showed that the magnetic moment and, therefore, the magnetic susceptibility increased logarithmically with increased applied external field. Magnetization is most pronounced from 0.6 to 0.9 T; above 0.9 T only a modest increase (approximately 10%) is achieved with any further increase in external field strength. These data both predict and support the observations of Edelman et al. regarding the ability to image magnetic susceptibility changes at moderate field strength, and they also suggest the potential efficacy of contrast material that relies on magnetic susceptibility effects at a broad range of field strengths. Our data are based on particulate iron that is 150–250 Å. However, the different iron moieties involved in hemorrhage will each no doubt have a characteristic magnetic susceptibility profile at various field strengths.

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Risk of Ferromagnetic Ocular Foreign Bodies in MR

An article in *AJNR* [1] points out the risk of ferromagnetic ocular foreign bodies in MR imaging. We have recently encountered two patients with remote cataract surgery in whom the lens prosthesis is implanted by a metal stave. In these patients, a platinum wire extending 1–2 mm from the superior edge of the lens functions as a clip, anchoring the lens through an iridectomy. This type of cataract repair (Worst Platina IOL [2]) was once a commonly used form of cataract prostheses that has given way to nonmetallic staves. Platinum is mildly paramagnetic, having a low magnetic moment [3]. Therefore, these patients can be imaged without risk of disruption of the lens or possible complications, as discussed in the article by Kelly et al. [1]. To our knowledge, no previous mention has been made in the radiologic literature of the risk of studying postcataract patients with this method, and no complications have yet been reported. Patients who have had remote cataract surgery and ophthalmologists who have performed these procedures often have no ready recollection or documentation of the type of cataract implant used. Review of the ophthalmology literature suggests that the metal used in ocular implants appears safe for MR imaging. Study of the torque force exerted on the lens implant at various field strengths would be of interest to confirm these expectations.

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Pantopaque on MR

In reading the paper by Braun et al. [1] about MR of Pantopaque, we were surprised to find that Pantopaque did not fit the authors' limited definition of an MR contrast agent. In a review of MR contrast enhancement, Brasch [2] used a broader definition that included other agents besides paramagnetic compounds. He specifically mentioned lipids, and cited animal work with mineral-oil enhancement of bowel loops. Pantopaque clearly increases the contrast between the cortical bone of the spinal canal and the subarachnoid space on T1-