aneurysm just after labeled SMC seeding. Hypointense signal areas were present up to 28 days after cell transplantation. Perls staining and fluorescent histological analysis confirm the presence of iron-labeled cells in contact with the lumina at day 0. At longer times, parallel to intima formation, labeled cells were observed within intima and media up to day 28. Immunohistological studies confirmed the presence of iron-labeled smooth muscle cells. High-field ex vivo MR imaging (9.4 T) showed a well-defined hypointense signal layer in gradient-echo sequences which correlates with histological Perls staining.

Conclusions: This study showed the potential of these magnetic nanoparticles as a cell label for long-term MRI in vivo. Labeled cells are easily detected even after 1 month. All data confirmed the integration of SMC within the aneurysm aortic wall, allowing intima development and stabilization of aneurysm lesions.

References

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**In vivo MR tracking of magnetically labeled dendritic cells: first clinical experience**

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Session 11: Iodinated agents: Tolerance—Allergy

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Radiodiagnostic examinations with iodinated contrast media may result in severe DNA damage resulting in cellular radiosensitization

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**Figure 1.** (A) MRI (3 T) of a patient injected with SPIO-labeled DC. Arrows indicate the injected LN (1) and one of four following LNs (2) to where SPIO-DC had migrated. (B) MRI (7 T) of resected lymph node 2 days after injection of SPIO-labeled DC. (C–E) Histology of same LN as in B. Blue, iron; red, nuclei. (D) Detail of the T cell area of an LN to which SPIO-labeled DC had migrated. (E) Immunohisotochemistry of SPIO-labeled cells in T-cell area of LN. Brown, CD68; in inlet, CD83