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Cerebral microbleeds. Utility of SWI sequences

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Abstract

Objectives: Define the concept of cerebral microbleeds (CMBs) and describe the most useful MRI sequences for detecting this finding. Review the entities that most frequently present with CMBs and that may benefit from the use of susceptibility-weighted imaging (SWI) sequences.

Conclusions: SWI is a useful MRI sequence for the detection and characterization of microhemorrhages, venous structures and other sources of susceptibility in imaging. SWI is particularly sensitive to local magnetic field inhomogeneities generated by certain substances and is superior to T2* GRE sequences for this assessment. CMBs may be seen in different neurologic conditions, in certain infrequent clinical contexts and have a key role as a biomarker status in gliomas (ITTS) and as a marker of inflammatory activity in multiple sclerosis.

Keywords: Cerebral hemorrhage; Cerebral microbleeds; Hemorragia cerebral; Magnetic resonance imaging; Microhemorragias cerebrales; Multiecho gradient recalled echo; Resonancia magnética; Secuencia de eco gradiente; Secuencias de susceptibilidad magnética; Susceptibility weighted imaging.

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