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**NeuroImages**

**MR choroid plexus sign of iron overload**

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A 7-year-old boy with Diamond–Blackfan anemia was transfusion-dependent at age 4, at which point hemochromatosis progressed. Laboratory studies showed the following: iron 292 μg/dL (normal, 70 to 190 μg/dL), unsaturated iron binding capacity 29 μg/dL (normal, 130 to 370 μg/dL), and ferritin 6403 ng/mL (normal, 26.0 to 250.0 ng/mL). A brain MR study indicated the restricted accumulation of iron in the choroid plexus (figure). CT demonstrated no calcification on the choroid plexus. These findings are compatible with neuropathologic examination of a patient with hemochromatosis.1

According to the autoradiographic distribution in the adult rat brain, the choroid plexus showed the highest uptake level of 59Fe from the blood.2 Thus, the choroid plexus might protect the brain from iron overloading through a buffering effect.

MRI, especially T2*-weighted imaging, effectively detects iron overloading because of a striking reduction of T2 relaxation time. Further investigations by using T2*-weighted imaging are necessary in patients with various causes of iron overload including primary hemochromatosis and acute iron intoxication.

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**References**


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